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## Next Week

H. R. Lyon on the Bayeux Tapestry  
University bids to the UGC  
The English Historical Review: the first century

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## The colleges' last chance

Nineteen eighty-six will probably be the last year in which the 70-odd colleges and institutes of higher education have a fair chance of establishing themselves securely as a third force in higher education alongside the universities and the polytechnics. It is in the public interest not simply their own that they should be successful. For if they fail it will become much more difficult to conceive of higher education on a small, local, human scale rather than as an activity both intellectually and geographically remote appropriate only for those in British society who in Mr Norman Tebbit's memorable phrase are prepared to get on their bikes. And if they fail the opportunity to move towards a genuinely democratic system of higher education open to all interested citizens such as the Americans enjoy will be sharply restricted.

A lot more is at stake therefore than the fates of these colleges. The issues are as much, or even more, of educational principle as of institutional survival. This needs to be emphasized because so few of the participants in the debate about the future of the colleges of higher education are prepared to recognize this wider dimension. The Department of Education and Science certainly has little incentive to see the colleges thrive. After all, they have the hidden potential to increase popular demand for higher education at a time when the Government is bent on curbing it to match demographic decline, and in subjects that seem irrelevant to economic regeneration.

In more detail the DES tends to judge the colleges as little more than the detritus of the messy reorganization of the colleges of education in the 1970s - but which is still far from complete as the present argument for state for Education and Science, and the National Advisory Body about initial teacher training demonstrates. In the eyes of the department too many of the colleges seem to lack the critical academic mass necessary to maintain degree standards. And of course the colleges get in the way of the DES's fundamental policy-line since at least the early 1960s, which is to concentrate higher education in a small number of large comprehensive institutions, the polytechnics, which can rival the universities.

The NAB is more of a friend to the colleges, but still a fickle one. However much emphasis it may place on the regional distribution of higher education, on the need to prevent non-degree courses being swamped by degree courses and part-time courses by full-time courses, and on continuing education, the NAB's abiding perspective as its title proclaims must be a national one. Its former system of allocating money discriminated against colleges and in favour of polytechnics. Although its new system will be more even-handed the NAB is almost bound to regard many of the colleges as awkward pockets of higher education, of at any rate arguable academic quality, often with weak local links, and insufficiently vocational in its orientation. So rationalization, incorporation, amalgamation hover in

the near background as almost irresistible solutions. The local authorities generally are indifferent to the careers of higher education. Several are church colleges so the whole sector has a strongly "voluntary" ethos. In any case local authorities tend to divide their patronage between their polytechnics, if they possess one, and ordinary further education colleges which offer some advanced courses of strong local significance. But perhaps the greatest difficulty faced by the colleges is their own collective failure of conviction about their capacity to make a distinctive contribution as a third-force sector to the future pattern of British higher education. Yet if the colleges do not believe in themselves how can they expect sceptical outsiders and potential predators to demonstrate a more robust belief in their future?

Those who hope that the colleges have an important contribution to make, even if they cannot believe it with all the conviction they would like, need to address two questions. The first is do the colleges of higher education make up a credible sector? Sceptics after all are tempted to believe that they are simply a rag-bag of institutions which have only one thing in common, that they are neither universities nor polytechnics but are nevertheless engaged in higher education. Some of the force of this dismissive description has to be accepted. The colleges are very different - proto-polytechnics, church colleges, teacher training colleges, local community colleges and so on.

As a result many would argue that it is misleading to regard the colleges as a coherent sector. Their preference is for splitting this so-called sector into three - upgrading a few colleges like the polytechnics, moving off a second group to the effective care of local authorities on the grounds that they fulfil only a minimal national role, and so isolating a smaller core of colleges predominantly engaged in teacher training or allied liberal arts and applied social science, many of which will be church colleges. Their recipe for this third group is rigorous rationalization with three objectives - to incorporate the best courses and departments in larger more viable institutions (in practice neighbouring polytechnics); to build up a small number of colleges of high quality concentrating on teacher training, and to close the rest.

If they wish to oppose such an outcome the colleges will need to come together to form a more united sector. Probably the Humbersides will have to be abandoned to the polytechnic sector in any case, but the rest of the reductionist scenario outlined in the previous paragraph is not equally inevitable. There is a case to be made for maintaining a sector of small but fairly comprehensive higher education colleges. Diversification out of teacher training into adjacent subjects was a valuable policy that has produced positive benefits, not an opportunist strategy to sustain viability.

The difficulty for the colleges of course is that they have to match their aspirations against their critics' actual-

ties. So they need to establish their own more positive scenario on as sure a practical footing as the reductionist scenario of the enemies. This is where the second question arises: what is, or should be, the job of such a third-force sector? The key is to be distinctive, different from universities and polytechnics. Clearly the colleges should place less emphasis on degrees for two reasons. First, their function as a safety-net to a safety-net will soon disappear as demographic decline reduces the number of qualified candidates who cannot find places in universities or polytechnics. Second, satisfactory degree standards are difficult to maintain in small colleges with few teachers engaged in research and without the right laboratories, equipment and other resources.

The colleges must find their students elsewhere than at the bottom of the barrel of candidates for degree courses. This means that they must pay more attention to developing two-year qualifications as the first stage of a higher education that may very well be continued in a polytechnic or university and to offering the widest possible range of continuing education. The nearest model is the American community college. So the colleges should regard their links with further education colleges, adult education institutes, and even tertiary colleges and secondary schools as important, as those with polytechnics and universities. They should look down and across as often as they look up.

Some people in colleges resist this conclusion. They believe that the distinctiveness of the colleges of higher education should be expressed not through the type and level of courses they provide but the quality of the education they offer at a national level and more caring environment than can possibly be provided on the mega-campus of the modern university or polytechnic. It is an enriching experience for the students in social and moral as much as intellectual terms. If the intimacy of their college is rooted in a Christian tradition its moral potency is further increased.

It is an argument that deserves to be listened to with respect. Our present system of higher education may appear to have utterly secular ambitions. But buried just beneath the surface of most courses, professional as well as academic, is humanist intention that owe much to our abandoned Christian heritage. However it is an argument that must be rejected, at least as the centre piece of the colleges' distinctiveness. This cannot depend on an ideal, especially one that can too easily be dismissed as waffly humanism or reactionary clericalism. Their claim to form a third force must be rooted in distinctive practice. It is that practice that the colleges must struggle to define. Open (or easy) access, first-cycle higher education within institutions with a strong pastoral tradition, continuing education in the local community college - it is by following such routes that the colleges will break the mould of British higher education not by trailing blindly in the wake of their big-brother universities and polytechnics.

## King Joseph III

The Inner London Education Authority is the largest single provider of higher education in Britain, although that is not its main business. Its polytechnics and colleges enrol more students than even the mighty University of London. The ILA comes closest in Britain to providing an American-style "system" of post-secondary education in all its variety and complexity. So the general fortunes of the authority have a particular significance for higher education.

Two recent and contrasting episodes therefore deserve to be noticed. First, despite the obvious political temptations, the ILA has shown great restraint. It has declined to set itself up as the Greater London Council in exile, as Livingstonia across the wa-

ter. All the present signs are that after the death of the GLC, the ILA will settle down to its proper role as an education authority for Inner London, although it is obviously right that this brief should be interpreted broadly.

The second sad episode is that Sir Keith Joseph has refused to show the same restraint. By insisting that the new ILA cut its budget by an unrealistic amount the Secretary of State has shown that he cannot resist playing party-political games. But his decision is not only irresponsible; it is also objectionable, for two reasons. First, by any account Inner London contains some of the most deprived districts in Britain today which suffer all the disadvantages well described in the

Church of England's recent report *Faith in the City*. Sudden and serious cuts in expenditure on education seem a curious response to this gathering crisis.

The second objection is that the ILA receives no money from the Government. All its expenditure is paid for out of local taxation. It is difficult to see what justification there can be in a democracy for allowing a minister whose department is contributing nothing to take this crucial decision about the level of expenditure rather than the voters of Inner London who are contributing everything. The argument between King George III and his American subjects was about this very issue, although with the demands reversed.

## Laurie Taylor



What on earth are you doing Gordon? We're all waiting for you to help carry out the Christmas tree.

With you in a second, darling. Must just sign this. What's that, sweetheart? Let me see. "I - Gordon Lapping - do hereby promise that:

1. I will never park my car in the college disabled space or reverse so far backwards in the central car park that the Dean is unable to get into his official parking space.

2. I will make all my courses relevant to the immediate needs of the British economy (whatever they might be).

3. I will never cast doubt on the intellectual value of overseas postgraduate students to the university by making public reference to their inability to speak English.

4. I will show myself ready - even eager - to move backwards and forwards between departments within the university whenever such matters are prompted by staff-student disparities in staff-student ratios or the whim of the Vice Chancellor.

Darling, there's really no need to. I will never refer to any previous acts of academic life in such a way as to arouse nostalgia and thereby discontent among other members of staff. Such aspects to include a library books, b. secretarial services, c. a salary which exceeded that of a junior policeman, d. self-respect.

6. I will eschew partisanship and endeavour to teach in a manner which does not allow students to have the faintest idea about my own opinions on the subject in hand.

7. I will henceforth refer to the Vice Chancellor as 'President' (in line with the Jarratt proposals) and in general give him the respect he deserves.

8. I will not take part in any Day of Action or other such futile attempts to influence Government policy on higher education.

Darling, do you have to? "9. I promise to work on all five days of the week and to take no more than the statutory holidays.

10. I promise not to go to my office in the afternoon, lock the door, switch off the light and spend long hours staring out at the campus in a profound disquiet.

And what's that? I realize that if I fail in any of these matters the consequences will be on my own head. And then you've signed it "Gordon Lapping. Professor, January 1, 1986". How sweet! New Year resolutions. But, Gordon, darling, what's the point? Last year you foreswore small cigars, malt whisky and Brooklands, and you've actually doubled your consumption of each.

These aren't exactly New Year resolutions.

No? No. They are the university's new "good cause for dismissal" provisions.

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## Desolate response to UGC

by Peter Aspdon

Universities will have to sacrifice diversity, efficiency, lecturers' jobs and quality of teaching and research in order to comply with the 10 per cent cut in funding predicted by the University Grants Committee by the end of the decade.

This desolate picture emerges from the universities' responses to the UGC's letter on future planning, which asked them to identify their research strengths, financial forecasts and student member projections, as a prelude to distributing research funds more selectively.

Many of the responses include or have been accompanied by bitter criticisms of the Government's plans for higher education, and all of them, although going along with the exercise, stress the severe damage which would be caused by the annual 2 per cent funding cuts.

Some vice chancellors have used the publication of their responses as an opportunity to deliver their strongest ever rebukes to the Government, spelling out the disastrous consequences of its plans.

The principal of the University of Manchester, Professor Harold Hanks, has used the Government's own pet theme to deliver his message. "I will not at the institute, he said, 'would drive lecturers from the academic world, reduce postgraduate courses and undergraduate options, damage research and seriously impair UMIST's services to industry'. They would represent a "flat contradiction of the avowed shift to science and technology."

All the responses predict massive financial deficits by the end of the decade, which could only be offset by losing randomly about 10 per cent of academic staff, postponing vital building and maintenance work, running down libraries and using most of their financial reserves.

Significantly, no university thinks it can achieve any substantial savings through trimming administrative costs or increasing efficiency. Most universities emphasize that they have already implemented many of the Jarratt recommendations; indeed some of them use the findings of the report as a weapon against the Government, which was urged to produce longer funding horizons.

Institutions have selected their research strengths in different ways, but nearly all of them identify information technology and computer-related subjects as key areas. Less "fashionable" subjects in the arts, humanities and social sciences are not so keenly stressed in many responses.

The UGC sent out its planning letter last May to enable it to make a more selective distribution of research funds; but universities will now be hoping it uses their responses as a tool to argue for more money.

Responses, pages 10 and 11  
Leader, back page

## NAB snub prompts local authority membership rethink

Local education authority leaders, incensed by the rejection of their advice on teacher training and architecture by the Secretary of State for Education and Science, Sir Keith Joseph, are questioning whether their relationship with the Government on the National Advisory Body can continue.

Sir Keith's recent letter to the NAB rejected its advice to postpone a review of teacher education and to close only one architecture school; that at North East London Polytechnic. The NAB should have proposed more rationalization and used better criteria for the architecture decision, he said.



## 'Save British Science' group leads fightback

by Jon Turney

The British scientific community is starting the new year determined to put across the case for more research cash. A new group called Save British Science, to be launched on Monday, already has 1,500 supporters among university and research council scientists.

The group is described by Dr John Mulvey of Oxford University, one of its instigators, as "giving voice to scientists' changes to express their feelings". The subscriptions already paid will be used to buy an advertisement in Monday's *Times*, publish a new analysis of Britain's scientific standing compared with other industrial countries, and hold an inaugural London press conference.

The group is independent of existing scientific organizations, although it claims support from 48 fellows of the Royal Society, including eight Nobel laureates. Although it began in Oxford - the physicist Professor Denis Noble who came to prominence last year for opposing award of an honorary degree to the Prime Minister is also

a prime mover - it includes scientists from many other institutions. The group is also anxious not to be identified with the cause of particle physics. Dr Mulvey's discipline, although he has been active in efforts to defend British membership of the European Centre for Nuclear Research (CERN) laboratory in Geneva. The chairman, Professor Joe Lamb, is a University of St Andrews physiologist who also convened an *ad hoc* group of learned societies studying the sciences last year.

The campaign organizers intend support by appointing conveners in each discipline, and quickly found a response. "There are many scientists who don't want to leave the country to do first class research," according to Dr Mulvey. He describes the group as a reply to the former junior education minister Mr Peter Brooke and other MPs who have told scientists they must bring their complaints more clearly before the public.

One of the Nobel winners who have pledged their support, Professor Anthony Hewish, the Cambridge radioastronomer, said: "It's time to make a noise about underfunding -

and there's no one to do that except the scientists themselves". Other Nobel laureates among the group's supporters include Professors Dorothy Hodgkin, Sir Nevill Martin, Niko Tinbergen, Maurice Wilkins, and Dr Cesar Milstein.

However, Professor Geoffrey Wilkinson of Imperial College, a chemistry laureate, said this week he had not backed the group as he did not believe advertisements in *The Times* would be read. He supported personal lobbying of ministers, but did not think a public expenditure vote forward look at social

expenditure was a good idea. Two further Nobel winners who have not backed the campaign are the present and past presidents of the Royal Society, Professors Sir George Porter and Andrew Huxley. Sir George said he suspected the vast majority of Royal Society fellows were in favour of the campaign, but he could not sign up in his present position.

However, he said the Royal Society was working hard to produce facts on the problems produced by lack of funds in its study on the health of basic science.

Ecceles had his way. At the end of the year he was allowed to produce for the Cabinet a lengthy statement on proposed developments in technical and technological education which went on to form the basis of a 1986 White Paper leading to the creation of the colleges of advanced technology.

But Eccles wrote: "The question of technical education might be considered separately from an examination of the future cost of the social services, since technical education, as one of the main elements in the expansion of production, was of a different character from the social services as that term was normally understood."

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## Records show technology cash victory

by David Walker

Cabinet records for 1955 now released under the 30-year rule show the then minister of education, Sir David Eccles, trying to protect the programme for the expansion of colleges of technology by claiming that technical education did not belong with social policy and so should not be examined as part of the Chancellor of the Exchequer's scrutiny of social expenditure.

The Chancellor, R. A. Butler - later Lord Butler, Master of Trinity College, Cambridge - was conducting a expenditure vote forward look at social

expenditure was a good idea. Two further Nobel winners who have not backed the campaign are the present and past presidents of the Royal Society, Professors Sir George Porter and Andrew Huxley. Sir George said he suspected the vast majority of Royal Society fellows were in favour of the campaign, but he could not sign up in his present position.

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Embroidering  
1066 and  
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A lot more is at stake therefore than the fates of these colleges. The issues are as much, or even more, of educational principle as of institutional survival. This needs to be emphasized because so few of the participants in the debate about the future of the colleges of higher education are prepared to recognize this wider dimension. The Department of Education and Science certainly has little incentive to see the colleges thrive. After all, they have the hidden potential to increase popular demand for higher education at a time when the Government is bent on curbing it to match demographic decline, and in subjects that seem irrelevant to economic regeneration.

In more detail the DES tends to judge the colleges as little more than the detritus of the messy reorganization of the colleges of education in the 1970s - but which is still far from complete as the present argument of the State for Education and Science, and the National Advisory Body about initial teacher training demonstrates. In the eyes of the department too many of the colleges seem to lack the critical academic mass necessary to maintain degree standards. And of course the colleges get in the way of the DES's fundamental policy line since at least the early 1960s, which is to concentrate higher education in a small number of large comprehensive institutions, the polytechnics, which can rival the universities.

The NAB is more of a friend to the colleges, but still a fickle one. However much emphasis it may place on the regional distribution of higher education, on the need to prevent non-degree courses being swamped by degree courses and part-time courses by full-time courses, and on continuing education, the NAB's abiding perspective as its title proclaims must be a national one. Its former system for allocating money discriminated against colleges and in favour of polytechnics. Although its new system will be more even-handed the NAB is almost bound to regard many of the colleges as awkward pockets of higher education, of at any rate arguable academic quality, often with weak local links, and insufficiently vocational in its orientation. So rationalization, incorporation, amalgamation hover in the air.

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Some people in colleges resist this conclusion. They believe that the distinctiveness of the colleges of higher education should be expressed through the type and level of courses they provide and the quality of the education.

During the 1970s more than can possibly be provided on mega-campus of the modern university or polytechnic is an enriching experience for the students in social and moral as much as intellectual terms. If the Christian tradition its moral potency is further increased.

It is an argument that deserves to be listened to with respect. Our present system of higher education may appear to have utterly secular ambitions. But buried just beneath the surface of most courses, professional as well as academic, lie humanitarian intentions that have been rejected, at least as a centre piece of the college's distinctiveness. This cannot depend on an ideal, especially one that can too easily be dismissed as waffly humanism or reactionary clericalism. Their claim to form a third force must be rooted in distinctive practice. It is that practice that the colleges must struggle to define. Open (or easy) access, first-cycle higher education within institutions with a strong pastoral tradition, continuing education in the local community college - it is by following such routes that the colleges will break the mould of British higher education not by trailing forlornly in the wake of their big-brother universities and polytechnics.

## King Joseph III

The Inner London Education Authority is the largest single provider of higher education in Britain, although that is not its main business. Its polytechnics and colleges enrol more students than even the mighty University of London. The ILEA comes closest in Britain to providing an American-style "system" of post-secondary education in all its variety and complexity. So the general fortunes of the authority have a particular significance for higher education.

Two recent and contrasting episodes therefore deserve to be noticed. First, despite the obvious political temptations, the ILEA has shown great restraint. It has declined to set itself up as the Greater London Council in exile, as Livingstone-across-the-water. All the present signs are that after the death of the GLC, the ILEA will settle down to its proper role as an education authority for inner London, although it is obviously right that this brief should be interpreted broadly.

The second sad episode is that Sir Keith Joseph has refused to show the same restraint. By insisting that the new ILEA cut its budget by an unrealistic amount the Secretary of State has shown that he cannot resist playing party-political games. But his decision is not only irresponsible; it is also by any account inner London contains some of the most deprived districts in Britain today, which suffer all the disadvantages so well described in the Church of England's recent report *Faith in the City*. Sudden and serious cuts in expenditure on education seem a curious response to this gathering crisis.

The second objection is that the ILEA receives no money from the Government. All its expenditure is paid for out of local taxation. It is difficult to see what justification there can be in a democracy for allowing a minister whose department is contributing nothing to take this crucial decision about the level of expenditure rather than the voters of inner London who are contributing everything. The argument between King George III and his American subjects was about this very issue, although with the demands reversed.

Laurie Taylor



# The Times Higher Education Supplement

January 10, 1986 No 688 Price 65p

## Desolate response to UGC

by Peter Aspdon

What on earth are you doing Gordon? We're all waiting for you to help carry out the Christie.

With you in a second, the universities will have to sacrifice diversity, efficiency, lecturers' jobs and quality of teaching and research in order to comply with the 10 per cent cut in funding predicted by the University Grants Committee by the end of the decade.

This desolate picture emerges from UGC's letter on future planning, which asked them to identify their research strengths, financial forecasts and student member projections, as a prelude to distributing research funds more selectively.

Many of the responses include or have been accompanied by bitter criticisms of the Government's plans for higher education, and all of them, although going along with the exercise, stress the severe damage which would be caused by the annual 2 per cent funding cuts.

Some vice chancellors have used the publication of their responses as an opportunity to deliver their strongest rebukes to the Government, spelling out the disastrous consequences of its plans.

The principal of the University of Manchester, Professor Harold Hanks, has used the Government's own themes to deliver his message. "I am sorry at the institute," he said, "would drive lecturers from the academic world, reduce postgraduate courses and undergraduate options, damage research and seriously impair UMIST's services to industry." They would represent a "flat contradiction of the avowed shift to science and technology."

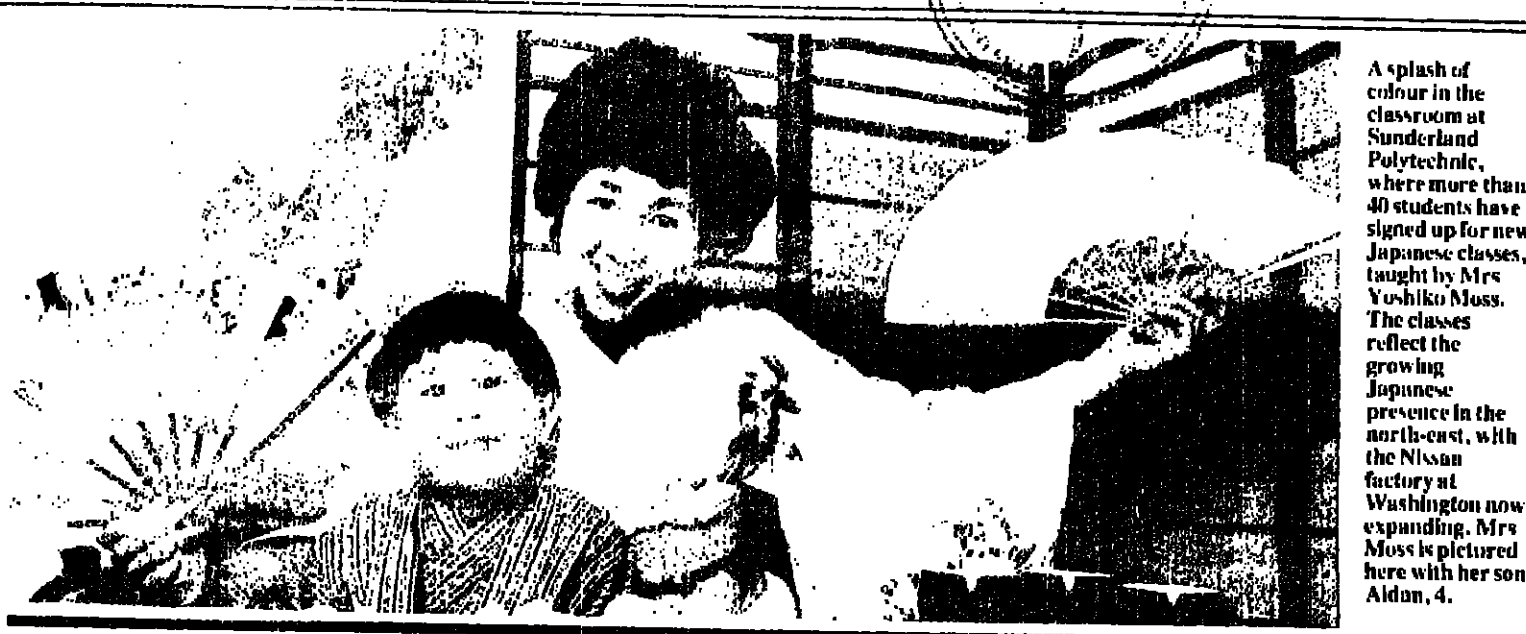
All the responses predict massive financial deficits by the end of the decade, which could only be offset by losing randomly about 10 per cent of academic staff, postponing vital building and maintenance work, running down libraries and using most of their financial reserves.

Significantly, no university thinks it can achieve any substantial savings through trimming administrative costs or increasing efficiency. Most universities emphasize that they have already implemented many of the Jarratt recommendations; indeed some of them use the findings of the report as a weapon against the Government, which was urged to produce longer funding horizons.

Institutions have selected their research strengths in different ways, but nearly all of them identify information technology and computer-related subjects as key areas. Less "fashionable" subjects in the arts, humanities and social sciences are not so keenly stressed in many responses.

The UGC sent out its planning letter last May to enable it to make a more selective distribution of research funds; but universities will now be hoping it uses their responses as a tool to argue for more money.

Responses, pages 10 and 11  
Leader, back page



A splash of colour in the classroom at Sunderland Polytechnic, where more than 40 students have signed up for new Japanese classes, taught by Mrs Yoshiko Moss. The classes reflect the growing Japanese presence in the north-east, with the Nissan factory at Washington now expanding. Mrs Moss is pictured here with her son Aidan, 4.

## 'Save British Science' group leads fightback

by Jon Turney

The British scientific community is starting the new year determined to put across the case for more research cash. A new group called **Save British Science**, to be launched on Monday, already has 1,500 supporters among university and research council scientists.

The group is described by Dr John Mulvey of Oxford University, one of its instigators, as "giving working scientists a chance to express their feelings". The subscriptions already paid will be used to buy an advertisement in Monday's *Times*, publish a new analysis of Britain's scientific standing compared with other industrial countries, and hold an inaugural London press conference.

The group is independent of existing scientific organizations, although it claims support from 48 fellows of the Royal Society, including eight Nobel laureates. Although it began in Oxford - the physiologist Professor Denis Noble who came to prominence last year for opposing award of an honorary degree to the Prime Minister is also a prime mover - it includes scientists from many other institutions.

The group is also anxious not to be identified with the cause of particle physics. Dr Mulvey's discipline, although he has also been active in efforts to defend British membership of the European Centre for Nuclear Research (CERN) laboratory in Geneva. The chairman, Professor John Lamb, is a University of St Andrews physiologist who also convened an *ad hoc* group of learned societies studying research funding last year.

The campaign organizers gathered support by appointing conveners in each discipline, and quickly found a response. "There are many scientists who don't want to leave the country to do first class research," according to Dr Mulvey. He describes the group as a reply to the former junior education minister Mr Peter Brooke and other MPs who have told scientists they must bring their complaints more clearly before the public.

One of the Nobel winners who have pledged their support, Professor Anthony Hewish, the Cambridge radioastronomer, said: "It's time to make a noise about underfunding - and there's no one to do that except the scientists themselves". Other Nobel laureates among the group's supporters include Professors Dorothy Hodgkin, Sir Nevill Martin, Niko Tinbergen, Maurice Wilkins, and Dr Cesar Milstein.

However, Professor Geoffrey Wilkinson of Imperial College, a chemist laureate, said this week he had not backed the group as he did not believe advertisements in *The Times* would be read. He supported personal lobbying of ministers, but did not think a public campaign would make much difference when the funding position was already known in such detail.

Two further Nobel winners who have not backed the campaign are the Royal Society Professors Sir George Porter and Andrew Huxley. Sir George said he suspected the vast majority of Royal Society fellows were in favour of the campaign, but he could not sign up in his present position.

However, he said the Royal Society was working hard to produce facts on the problems produced by lack of funds in its study on the health of basic science.

## Records show technology cash victory

by David Walker

Cabinet records for 1955 now released under the 30-year rule show the then minister of education, Sir David Eccles, trying to protect his programme for the expansion of colleges of technology by claiming that technical education did not belong with social policy and so should not be examined as part of the Chancellor of the Exchequer's scrutiny of social expenditure.

The Chancellor, R. A. Butler - later Lord Butler, Master of Trinity College, Cambridge - was conducting a secret five-year forward look at social expenditure. He warned his colleagues in the Eiden government that projected increases were huge and choked off any opportunity for tax cuts.

But Eccles wrote: "The question of technical education might be considered separately from an examination of the future cost of the social services, since technical education, as one of the main elements in the expansion of production, was of a different character from the social services as that term was normally understood."

Eccles had his way. At the end of the year he was allowed to produce for the Cabinet a lengthy statement on proposed developments in technical and technological education which went on to form the basis of a 1956 White Paper leading to the creation of the colleges of advanced technology.

## Sir Keith goes for the Popper approach

by Karen Gold

Sir Keith Joseph, Secretary of State for Education and Science and long-term *bête noire* of sociologists, has uttered his support for sociology in principle but not necessarily in practice.

Sir Keith was replying to questions from members of the British Sociological Association, put to him in writing and answered in the latest edition of the *BSA Journal Network*. He has no antipathy to sociology, nor to any other subject, he says. He agrees that criticisms of sociology as frivolous or irrelevant are misinformed, misplaced and misleading. But the rider is on social sciences in principle. "My antipathy is only to the practitioners in the professions of any discipline to meet the standards of quality and rigour both students and the taxpayer have the right to expect," he writes.

"Sociology has grown rapidly in recent years... but it is a more demanding and rigorous subject than is often realized, and... requires that those who practise it have to be ever vigilant that the subject is not allowed to become a vehicle for indoctrination of any kind."

Sir Keith picks Popper and Hayek as his own influences when asked to name sociologists influential in the subject; their writing needs to be taken into account by sociologists who may advocate more state spending or control when those are the problem, he writes.

He steadfastly avoids using the phrase "social science", replacing it with "social studies" in his reply whenever it appears in a question.



Embroidering 1066 and all that, 16

## NAB snub prompts local authority membership rethink

Local education authority leaders, incensed by the rejection of their advice on teacher training and architecture by Secretary of State for Education and Science, Sir Keith Joseph, are questioning whether their relationship with the Government on the National Advisory Body can continue.

Sir Keith's recent letter to the NAB rejected its advice to postpone a review of teacher education and to close only one architecture school that at North East London Polytechnic. The NAB should have proposed more rationalization and used better criteria for the architecture decision, he said.

But at their forthcoming education committee meetings, members of both the Association of County Councils and the Association of Metropolitan Authorities - who comprise all but two seats on the NAB's committee - will ask whether going through such review exercises only to have their advice rejected is worth it.

According to an ACC spokesman, the association's February meeting is likely to consider the whole question of the relationship between local authority representatives on the NAB and the Secretary of State.

Members do not reach their advice without considerable amounts of personal concern about whether they are getting it right," he said. "They are going to find it extremely difficult to carry on going through long exercises that are very often not very welcome in the colleges if the response is unacceptable."

The row has also resurrected tensions between the NAB board - which comprises representatives from throughout higher education - and the committee, which tenders final advice to the Secretary of State. A meeting of both at the end of the month is due to discuss differences between them, stemming from the different policies they adopted on increasing student access next year.

But in its reply to Sir Keith's letter, the AMAs says his mention of possibly preferring the board's advice to architecture to the committee's "makes us once again question the regard in which you (Sir Keith) hold the NAB and its committee."

"We think it most unfortunate that your words imply such disrespect for the NAB's policy-making body, the committee."





There cannot, I suppose, be a time in the life of a serious academic when all the books necessary for being up-to-date with the subject have been read and understood. For most of us there is no end to the material and the list stored in the mind of books that will have to be read one day when time is available gets longer with every year.

It may be because of that impossible situation that I find, as no doubt other academics do as well, that I suffer from the illusion that I have read some books and know them intimately, without ever having turned a page of them. It is not even necessary to do it deliberately, like participants in a David Lodge game of *Humiliations*; for me it happens without malice or intent. I just come to believe that the book is one of my favourites and that I almost know it by heart. With notable exceptions, I have in fact at different times reviewed for *Journals* Bannister Fletcher's *History of Architecture* (which no one has ever read completely except in hospital), and the *Encyclopaedia Britannica* (for which the journal did not let me keep the copy but paid a paltry fee instead).

It was a simple item that recently put this thought into my mind. I have not yet seen the film of *A Passage to India* though I have heard enough about it to give a convincing impression of the critical viewer. What astonished me was the discovery that I had never read the book.

It was not for want of talking about it. Having studied English literature for a year at university, I belonged to all sorts of literary societies and even listened to Forster talking about his work. I thought I knew it. The name in the Marabar caves was a familiar phenomenon and I could remember some of the phrases. "For an instant she went mad, blitting and gasping like a fanatic... there was a terrifying echo... Whatever is said, the same monotonous noise replies, and quivers up and down the walls until it is absorbed into the roof... Doun... or bou-oun or ou-boun... utterly dull".

Now, having at least read *A Passage to India* (and been almost unable to take my eyes from the page), I recognize that what I knew were excerpts to books of literary criticism. They seemed at once more significant and less evocative than they actually are. I had exaggerated in my mind the mystical meaning of the noise; I had also mistaken the person to whom the experience happened, thinking it was Miss Quested when it was Mrs Moore. That did not matter. For Forster himself did not know what had happened in the Marabar caves and nor does anyone else.

But Forster has always left me baffled. There is a passage in *Aspects of the Novel* that seems to me either fantastically naive or very funny. "If it was not for death and marriage I do not know how the average novelist could conclude. Death and marriage are almost his only connection between his characters and his plot, and the reader is more ready to meet him here, and take a bookish view of them, provided they occur later on in the book: the writer, poor fellow, must be allowed to finish up somehow, he has his living to get like anyone else, so no wonder that nothing is heard but hammering and screwing." Not, of course, in the Marabar caves.

Patrick Nuttgens

# Letters to the editor

## Public image of the academic

Sir, - Any attempt by the Committee of Vice Chancellors and Principals to improve the public image of universities will have a hard time eradicating the image of the academic as transmitted by British film and television.

In the course of an informal study, the average end of my working day) over the last year, of the image of the academic as presented in American and British films and television programmes, I have evolved the following preliminary hypotheses:

In American films/programmes, academics are either young and good-looking (Clint Eastwood, even appeared as a mountaineering, macho professor of art history in *The Edge of Darkness*), or white-haired and patriarchal, sometimes with an authoritative central European accent (see *Fame*). In British films/programmes, academics are either grotesque or bald (I admit that Dr Who is something of an exception, but so that no one gets the wrong idea, he does not appear to have tenure at a university and his activities take place in the distant future).

## Oxford cuts

Sir, - In your article "Oxford blasts outbacks" (*THE*, December 13) you correctly state that the university has condemned the proposed cuts in very strong terms. But you do not point out that the entire UGC planning exercise is now obsolete because the cut for 1986/87 is not 2 per cent as in the UGC hypothesis but around 5 per cent.

In the UGC scenario, Oxford would not withdraw from any major area of activity, but if the annual reduction in funding were 5 per cent every year the pressure to close a complete department would intensify.

The 2 per cent cut itself is sufficient to close any of the major faculties. In the UGC exercise the university plans 70 academic job losses. This figure would inevitably soar if the 5 per cent cut is repeated. And what about standards?

While the language used to condemn the cuts is welcomed by the student union it is clearly insufficient. We are calling for the non-implementation of these cuts by the implementation of university and collegiate reserves, and support for this has already been forthcoming from several notable dons.

We also part company from the university on how cuts in quantity will affect cuts in quality. A combined downward movement in the unit of resource, especially if it is on the scale of 5 per cent, would destroy the university's reputation for high academic standards. The value of a university education will sink to the ridiculously low level it already is in Sir Keith's eyes - and he graduated from Oxford!

Yours faithfully,

NIGEL NAGARAJAN,

Chair, Oxford University Students Union Cuts and Grants Committee,

28 Little Clarendon Street, Oxford.

Religious view

Sir, - There is a common view of religious studies and theology degree courses as being of narrow vocational interest. We are compiling information which will be of interest to students entering higher education and would be interested to hear from people who have found a degree in RS or theology to have been of value in careers other than the church or teaching vocations. Information should be sent to our SW Regional Office, 47 Prospect Park, Exeter EX4 6NA.

Yours sincerely,

ROBIN SHEPHERD,

Chairman,

Professional Council for Religious Education,

2 Chester House,

Pages Lane,

London N10.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

In American films/programmes, academics are positively potent, capable of using their academic training to right wrongs, protect minorities or endangered species, and detect criminals; they are compassionate, wise, judicious and conciliatory. They may be crotchety (*On Golden Pond*), but they're witty and they know a lot (good) and in the end, they're redeemable. In British films/programmes, academics are either inept or lecherous, parasitical (the lecturer in *Edge of Darkness* managed to combine all these qualities in contrast to the honest, heroic, thin-lipped, human policeman); impractical (*Wide Peter*); or the possessor of knowledge which is of no use or interest to anyone but themselves (*vide* *Barkworth's* 10-part demonstration in *Late Starter*) or the possessor of knowledge which is of no use or interest to anyone but themselves (*vide* *Barkworth's* pre-lecture in the 10-part *Queens* who recites incomprehensible Latin poetry to his children in a lunatic, high-pitched voice).

We cheer Lucky Jim because, at the end of the novel, he thumbs his nose at

the groves of academe and joins the world of business. We sneer at the heroes of Malcolm Lodge's novels because they can't do so. No wonder the Americans pay their university teachers more and provide their scientists with generous research facilities: no wonder my children's friends gasp with amazement when they discover that I know which way round to hold a screwdriver.

To redress the balance, I suppose that David Bradbury might like to try his hand at an all-action, mega-blockbuster in which a (British) professor of Armenian archaeology rescues Mrs T. and Sir Keith J. from a drug-crazed, gun-toting gang of Marxist Anglican bishops. Jeffrey Archer, I remember, had a modest go at re-casting the academic's image in *Not a Penny More, Not a Penny Less*, but - oh dear American. See what I mean?

Yours sincerely,

RICHARD SHEPPARD,

School of Modern Languages and

University of East Anglia.



## Instant answer

Sir, - In her criticism of ESRC-supported research on crowd behaviour as not being useful, Karen Gold (*THE*, January 3) like many others confuses strategic with tactical research and ESRC funding with commissioned research.

When the recent Poppellwell inquiry into crowd safety and control required social science input to help understand the events in Bradford and Brussels and formulate immediate recommendations to ensure they would not recur, they approached a number of researchers directly (myself included) with specific questions. Answering these questions required a major survey of 1,000 football supporters.

However, because of the urgency of the inquiry we had to complete the survey and report within two months. Rather less time than it can take ESRC to respond to a request for funding. Yet despite this rapidity

of response, from the reactions of Justice Poppellwell, I understand that the social science input was found to be of value.

It must be emphasized that this commissioned research, conducted at such speed, would have been impossible if earlier, strategic research had not existed and if my own research group had not already had experience from previous long-term projects of the issues and methodologies involved.

"Expecting social science to be useful" as Karen Gold puts it, should not be taken by the Government, ESRC or journalists to mean that every project has to have an immediate, acceptable set of implications for policy-makers. The fewer rolling programmes of research we have the less will be our capability of responding to the problems of the day.

DAVID CANTER,

Professor of Applied Psychology,

University of Surrey,

Guildford.

Flying free

Sir, - In his attempt to equate aeroplanes with prisons, Adrian Furnham (*THE*, December 27) overlooked the first principle of hatchet-job writing: he omitted to sharpen the blade.

Are we truly "left naked, helpless and deprived of the security of familiar, often practical objects"? Most passengers require nothing more than books, snacks, playing cards, and other lightweight, reasonably sized objects. No airline bans such items. Checking luggage hardly constitutes being "deprived" of them, and as for those that are never returned, restitution is made either by the airline or an insurer.

Keeping one's seat belt on during a flight is not "apparently" for safety. In fact, it is to protect against unexpected dives that very occasionally are caused by unanticipated wind shifts. "Mobility and access" are indeed crucial, but these are never denied in aeroplanes except for good reason. During a dive, I don't want mobility, and I don't want anyone else inside the cabin to have it either.

In my experience, when an aeroplane is sprayed, it is not done for the safety of the passenger. It is done to protect the host country from insect infestation.

I've never been to prison, but my understanding is that the inmates are required to enter, and prevented from leaving until a certain date has been attained. I've flown frequently, and each time it's been voluntarily. Upon arrival, the authorities have never prevented me from departing, and they've always kept the torture to a minimum.

Yours truly,

ROBERT LIEBMAN,

(Travel writer),

PO Box 152,

London N1.

## Blacklist doubts

Sir, - Staff at the institution concerned must have welcomed their successful appeals against ESRC blacklist imposed for completion rates (*THE*, December 20). However, I am surely not being as baffled and incredulous as latest decision as by the announcement of this policy.

In the case of my own local Sheffield City Polytechnic, the appeal has not been successful. The policy is based upon a sample of three students, one of whom is a domestic reasons before any announcement, this should be taken from consideration. A strike vote and the emphasis on the mature students and the of the structure proposals as a basis for negotiations ending, despite which is to be followed by further day or half-day strikes linked with rallies in the regions later this term.

The union's general secretary, Ms Diana Warwick, said: "We hope we will be able to close down most universities for the day."

The AUE is being joined in the strike by members of the National and

Scottish Correspondent

Strikes hit Scottish colleges

Scotland have "littered and dragged their feet," said Mr Dale.

Scottish lecturers rejected a 5 per cent pay increase in September, and the following month rejected an improved offer of 5.6 per cent, with another 1.4 per cent from January.

"Scottish lecturers' grades are lower than those south of the border, and Mr Dale said staff would be seeking a restructuring commitment, and moves toward a restoration of the Houghton pay levels of a decade ago, as well as an improved offer."

If this were not achieved, there would be "an explosion of anger across the whole sector," he predicted.

White schools could be barred from Rhodes scholarship

British scholarships annually reserved for two white-only South African schools could be nullified if an application by the Rhodes Trust, said to be intended to apply to the Charity Commission to change Cecil Rhodes' will, and annul the Rhodes scholarships awarded to the Paul Ross Gymnasium in Stellenbosch and the South African College School in Cape Town, which are state-supported and do not admit non-white students.

Rhodes, a mining magnate, reserved one scholarship for each of these and two other schools; which were all private at the time of his death in 1902. The other two schools are still private and have a small number of black students.

Part and present Rhodes scholars, mostly from the United States, have been campaigning against the reserved

awards for two years, saying they discriminate against non-white students and do not apply in any of the other 17 countries where the scholarships of two to three years paid study at Oxford University are awarded.

"This violates what we see to be the spirit of the scholarship," Elizabeth Kiss, a third-year Rhodes scholar and spokesperson for the students campaigning for the annulment said. "We are concerned with the operation of Rhodes scholarships in South Africa, and with the situation in the country."

South Africans can apply for five scholarships in addition to the four reserved awards. Of 700 who have received the scholarships, only six have been non-white.

Dr Fletcher said more non-white students had not won awards because of competition from white students, whose education system was much better. He said the trustees had no plans to change the basis of the award, which was an open competition.

If the Charity Commission approves the application to change Rhodes' will, Parliament would then have to amend the 1929 Rhodes Trust Act to make the annulments law. Dr Fletcher said the trustees had not yet decided what would happen to the two scholarships if their application succeeded.

Women's status

Sir, - In arguing that there is still a way to go before women enjoy equal status with their male colleagues at Cambridge, Hilary Tagg (*THE*, December 13) has correctly noted that they seriously under-represented at the senior academic staff of the university.

But it would be interesting to see what is the position lower down among undergraduates in the results. For example, if there were some bias against women in admissions, so that girls had to be that better than their male competitors, this ought to show up in the examination results three years or if proportionately fewer women appeared in class I, from which the future university lecturers are recruited, that would explain some of the way towards equalizing the observed discrepancies.

These are important questions, so any relevant statistics which may be available ought to be published in the future.

Yours, etc,

C. B. GOODHART,

Home Grove,

8 Burnt Close,

Grantham,

Cambridge.

## Employers stand firm on structure

by David Jobbins

University employers are to refuse to withdraw their plans for sweeping changes in academics' salary structure when they meet union leaders later this month.

And this week they expressed regret at the one-day strike called by the Association of University Teachers for next Wednesday, and aimed at drawing attention to under-funding and salary erosion.

Mr Tom Hayward, senior manager, personnel official, said: "One reason for the frustration of the AUE and its members but what is needed at this time is action which will raise university salaries in the esteem of ministers and the public generally rather than steps of announcement, this should be taken from consideration. A strike vote and the emphasis on the mature students and the of the structure proposals as a basis for negotiations ending, despite which is to be followed by further day or half-day strikes linked with rallies in the regions later this term."

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C. B. GOODHART,

Home Grove,

8 Burnt Close,

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Cambridge.

Women lead part-time study trend as numbers double

Part-time students numbered in higher education almost doubled between 1970 and 1984, according to the government's latest statistical plotting of British society, "Social Trends".

In 1970 there were around 165,000 part-time students, two-thirds of them in polytechnics and colleges of higher education; the rest in universities, almost half of which were in the Open University.

By 1983/84 there were 313,000, 90 per cent more than in 1970/71, the 1986

edition of "Social Trends" says. But the increases are spread unevenly. The number of women part-time students has increased fivefold: from 22,700 in 1970/71 to over 103,000 in 1983/84. Male students, by contrast, have increased by two thirds, from 142,000 to 210,000.

Part-time students in ordinary universities have increased by 50 per cent over the same period. But numbers at the Open University have more than tripled: from around 20,000 to over

75,000. From having slightly fewer than all other universities combined in 1970/71, the OU now has twice as many.

In the public sector the numbers have increased from around 120,000 to over 200,000: a rise of 66 per cent, again with a much larger increase, among women - five fold - compared with the increase in men students from 110,000 to around 145,000.

The rise in numbers of women brings them closer to the pattern of

their participation throughout higher education: in 1970/71 women accounted for 14 per cent of part-time students but 40 per cent of full-time students. By 1983/84 they accounted for 33 per cent of part-time students and 42 per cent of full-time students.

The study also shows a marked rise in the overall educational qualifications of adults in the last 30 years. *Social Trends*, published by HMSO, available £19.95 from government and other bookshops.

NAB to bring in consultants

The National Advisory Body is commissioning management consultants to carry out case studies in 10 polytechnics and colleges as part of its Government-sponsored efficiency inquiry.

The consultant teams, with an officer from each college chosen, will be looking at institutions' internal organization, management information systems and the use of performance indicators.

Performance indicators are a strong theme in a letter which went to institutions and local education authorities from the NAB this week, announcing details of the studies and asking for comments by the end of February on management practice in public sector higher education.

The NAB efficiency working group wants to know in particular about performance indicators used by institutions and local education authorities in management and self-assessment, comparison with other institutions and monitoring over a period.

It suggests items like average class sizes, student and lecture hours, staff student ratios, per group assessment and unit costs; statistics on student publications and first destinations on leaving.

NAB officers, including temporary staff taken on for this purpose, will visit institutions to look at instruments and articles of government in operation, while a team of local authority officers and a second member of staff from a polytechnic will look at local college relationships.

No business school job for female professor

Professor Angela Bowey, Strathclyde University's sole female professor, who recently lost a sex discrimination case against the Equal Opportunities Commission, is not to have her contract renewed after the end of this month.

Professor Bowey, who was appointed to the Strathclyde business school in 1976, has been director of the pay and rewards research centre for the past few years, a unit which the university says is likely to close in the near future because of the lack of outside funding.

Professor Bowey is currently travelling in the United States and was unavailable for comment, but Strathclyde's registrar, Mr David Morrell, stressed that she was not being dismissed. There were many fixed term contracts within the university, and non-renewal implied no adverse comment on the individual concerned.

Mr Morrell said what was unusual in this instance was Professor Bowey's rank, but this was because when the business school was set up a decade ago, its first director strongly believed that appointments should be on a contractual basis, as was the case in the business world.

Professor Bowey is the only professor still remaining on a contract, as the university changed some six years ago, with new professorial appointments having tenure.

Angela Bowey has been prominent in the area of women's rights in universities, and is convener of Strathclyde's steering board for opportunities for women. Mr Morrell said her work in this area would now be the responsibility of a university-wide committee.

Professor Bowey also learned recently that she has not been reapp

Classics move from Bangor to Durham

Lecturers in the classics department of the University College of North Wales, Bangor, are set to move to Durham University at their own request.

Three of the department's four academics will make the move if the University Grants Committee approves. The other lecturer, Mr John Ellis Jones, will stay at Bangor to teach archaeology as part of the college's history degree.

A spokesman for the college said the department was moving to Durham to help it survive and remain viable. "The transfer was initiated by the department itself after a meeting because people are feeling the same pressure which is affecting all small departments," he said.

He said the do-it-yourself rationalization plan had met some resistance from other members of the college. As a service department, it will certainly be missed.

The transfer is also unusual because of the federal nature of the University of Wales. The loss of the department to an English university is bound to worry those who feel such a move should be restricted within Welsh boundaries.

Women lead part-time study trend as numbers double

Part-time students numbered in higher education almost doubled between 1970 and 1984, according to the government's latest statistical plotting of British society, "Social Trends".

In 1970 there were around 165,000 part-time students, two-thirds of them in polytechnics and colleges of higher education; the rest in universities, almost half of which were in the Open University.

By 1983/84 there were 313,000, 90 per cent more than in 1970/71, the 1986

edition of "Social Trends" says. But the increases are spread unevenly. The number of women part-time students has increased fivefold: from 22,700 in 1970/71 to over 103,000 in 1983/84. Male students, by contrast, have increased by two thirds, from 142,000 to 210,000.

Part-time students in ordinary universities have increased by 50 per cent over the same period. But numbers at the Open University have more than tripled: from around 20,000 to over

75,000. From having slightly fewer than all other universities combined in 1970/71, the OU now has twice as many.

In the public sector the numbers have increased from around 120,000 to over 200,000: a rise of 66 per cent, again with a much larger increase, among women - five fold - compared with the increase in men students from 110,000 to around 145,000.

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DON'S  
DIARY

## SATURDAY

Arrive in Addis Ababa at 9.15am after overnight flight from Heathrow. Relief supplies in sacks and containers litter the airport aprons. Anxious minutes before meeting members of host department who drive me the short distance into town in a Mercedes, overtaking droves of pack-donkeys. Straight to the bank to collect my non-negotiable currency, and then to hotel. Welcome sleep for three hours.

Spend afternoon exploring Addis with informal guide. Unlike Libya, the revolutionary military government has not suppressed private retail business. Enormous market flourishes, as well as tourist boutiques. Taxis very cheap, but each one plies over a limited sector. Heggars on street corners and outside the churches, and scores of boys offering a shoe-shine service.

Hotel swarms with aid and development personnel of all nationalities, and car park is full of vehicles emblazoned with logos of United Nations agencies and non-governmental organizations ranging from Unicef to Oxfam and Live Aid. Helicopters and RAF Hercules planes fly over heading north on relief missions.

## SUNDAY

Sleep fitfully with vivid dreams. Barometric pressure only 560mmHg at this altitude of 2,400 metres, so inspired oxygen pressure less by one-third than in Nottinghamshire. Pleasant temperature of 20°C however, despite being 8° north of equator. I calculate I am 2,400 miles due east of the Nigerian towns where I once worked for four years, but roses and sweet peas never mingled there with the bougainvillea and bananas. Get fit to St Michael's for Advent communion service. Could have been in any small-town parish church in England.

Private driving is banned on Sundays (partly Sabbatarianism, partly for fuel economy: petrol is rationed to 20 litres per week), so my host comes on foot to take me home to his villa for supper. He tells me he has taken up relinquished his departmental headship and associate deanship to become a clinical student in his own faculty. Denies that it is so that he can supplement his income with private practice; rather, he wants to make his physiology more clinically relevant. Walk back to hotel before midnight curfew.

## MONDAY

First day of oral examinations. I am to see half the class, the best and worst candidates, who are identified by number. No 1 turns out to be Swedish, and later there's a Sri Lankan and an Egyptian, all paid for by parents working in embassies. Ethiopian students are selected by the Commission (Ministry) of Higher Education from all over the country. They are fully state-supported and live in on-site dormitories with little or no space for private study. The university buys copies of a single American physiology textbook, but not enough for every student. Stationery also in short supply and there are not many books or places in the library. The few women to appear are very smartly dressed in European clothes while the men tend to be rather ill-dressed. The older men are paramedics being retained with the assistance of the World Health Organization.

TUESDAY/  
WEDNESDAY

Two more days of orals. Similar spread of talent to that among candidates at home, but a lower average which in part reflects the compression of a full pre-clinical diet into a single year's study. They have been taught by two Ethiopians, one Kenyan and one Indian; all, like the students, working in their second language. They sometimes intervene to interpret my questions, and tend to browbeat the candidates into producing a standard answer, rarely giving them a problem to work through. English conversation with candidates is more fluent with these Amharic-speakers than it has been previously with Arabic-speaking medical students elsewhere in North Africa. How fortunate we are that English is the main language of science.

## THURSDAY

Rest day while the anatomy examiners catch up. One of these turns out to be an old acquaintance from Khartoum, and the other lives 10 miles from me at home across the Trent. Taxi to the Institute of Ethiopian Studies in main university building housed in an old palace. Useful display of art and artefacts illustrating the history and human biology of the region. Special display on the ecology of the Afar herder-cultivators who have been hardest hit by the drought. Books and journals, however, not on open shelves and require a day's notice for access. Walk down hill to national museum whose brochure claims has helpful assistants who will show me the fossil skeleton of "Lucy", the earliest complete specimen of *Australopithecus africanus*. Disappointed to find museum not just closed but empty during refurbishment, with not even a postcard on sale.

Call at British Council office to request representative and thank him for arranging the trip. He is out, but we see exhibition of a full range of English Language Book Society editions including medical textbooks which would be a godsend if they were available in the faculty. Lending library is obviously well-patronized: a contrast with the government bookstalls which are full of Marxist-Leninist political tracts but little else (though I did find one with a good stock of Ladybird books).

## FRIDAY

Examiners' meeting to collate results between courses. No computing or reprographic facilities available in the faculty office so six examiners solemnly read out their marks for each candidate in a cyclical litany, while the vice dean compiles the master-sheet. A handful of students who have failed more than three subjects are dismissed from the faculty. The staff will now have to set supplemental examinations which will give the weaker students a final chance to redeem themselves. This academic year has been disrupted by Zemecha, a three-month recess during which staff and students in all institutions of higher education were mobilized in resettlement brigades to dig drains and build huts for villagers being relocated from the famine areas of the north to the southwestern lowlands which are still relatively fertile.

That evening we attend a relaxed get-together in the spacious apartment of an Ethiopian physiologist who enjoys a panoramic view of this beautiful city. Excellent buffet includes a plate of raw steaks which are discretely avoided by the expatriates. These include two homebred Russian anatomists on a two-year tour of duty and an English pathologist who "retired" here eight years ago and doesn't want to leave. He runs his department on a shoestring, and would regard even the declining budgets in the UK as generous beyond imagining. There's enough food and drink left over after the party to provision a trip out to the hills the next day before our return home.

John Patrick

The author is senior lecturer in the department of physiology and pharmacology in the medical school, University of Nottingham.

## NUS plans social security lobby

by David Jobbins

A mass lobby of Parliament later this term is likely to be backed by leaders of the National Union of Students this weekend in protest at the 2 per cent increase in grants and threatened loss of social security and other benefits.

The lobby, likely to be fixed for some time in February by the NUS executive, will be the focus of this term's action by the organization in its attempt to harness parent as well as student hostility to the new restrictions on welfare payments.

Implications of the changes ministers intend to make were spelled out this week by Mr Tony Newton, the minister for social security. He claims the sums involved for students will be "very small".

But the NUS says the £30 which is to be paid to all students living away from home and changes in assessment of housing benefit are no compensation for the £200 to £250 students are likely to lose because of the clamp-down.

The longer term costs to students will be much higher, the NUS claims. Students living in London will lose around £1,100, while those studying elsewhere face a drop in income of £800.

The organization has called a day of action for January 24, when its mem-

bers will concentrate on lobbying MPs in their constituencies. The NUS has drawn up a list of 60 constituencies in which the student vote is estimated to exceed the majority at the last general election but MPs picked out for special treatment are not likely to be targeted until later.

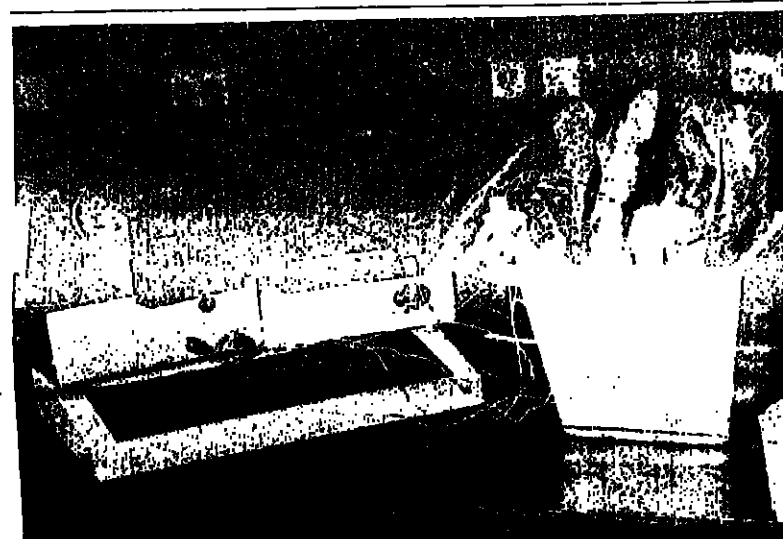
Meanwhile, the NUS is to make a second approach to MPs, pointing out to those who failed to respond favourably to its last letter in the autumn that the situation has deteriorated.

At least one university union, Sheffield, is writing to parents of all its students, asking them to approach MPs.

The changes in social security planned by the Government are: ● Removing students' right to supplementary and unemployment benefit in the short vacations. At present there are about 100,000 claims, with £3.5 million in benefit costing £2 million to administer.

● Excluding students in halls of residence from housing benefit and limiting payment to students absent from their accommodation in the long vacation. About £5 million is paid out in response to 135,000 claims at an administrative cost of £3 million.

● Covenants to cover only term-time, not the full year.



All wired up and ready to resist even the most adverse of environmental stresses is the "electric cauliflower" - part of a research experiment in *in vitro* selection techniques to raise harder crops. The research, to minimize frost damage to cauliflowers, will be one of three projects to receive an added injection of funds if Plymouth Polytechnic and Seale-Hayne College are awarded £75,000 for 1986/87 under the NAB biotechnology initiative as has been recommended.

## Poly course blacked in sacking protest

A decision by lecturers to black a postgraduate course at Birmingham Polytechnic in protest at the non-renewal of a lecturer's contract was attacked this week by director Dr Peter Knight.

The lecturers have voted overwhelmingly to take action in support of Mr Steven Newport, who was engaged on a 12-month contract in November 1984 to work on a diploma course in traffic and transport engineering.

When the polytechnic decided to continue the course for a second year it refused to renew Mr Newport's contract, and in a ballot of members of the largest branch of the National Association of Teachers in Further and Higher Education in the country, lecturers voted by 198 votes to 37 to refuse to do work for the course.

But Dr Knight, himself a former president of Nafhe, said: "I am appalled that Nafhe should embark on

action designed specifically to damage the education of students.

"At the moment I am not expecting the organization of the course to be seriously affected but it will be disrupted and the students will get a less good educational experience than I would have wished."

Many of the students on the course are from overseas and are paying the net cost of their training. It is to be ceased running or to operate at an unsatisfactory level the polytechnic might face demands for reimbursement from students' sponsors.

Nafhe says that Mr Newport had done a considerable amount of work connected with establishing the course, and that there was still work for him to do.

But Dr Knight said that Mr Newport last year taught only 66 hours against general expectation in the polytechnic of 510. The polytechnic is seeking ways

Bid to heal  
Unesco  
wounds

by Jon Turney

Science Correspondent

British scientific organizations working to minimize the damage international research links caused by withdrawal from Unesco.

And although the Government wants to retain a role in the four international organizations affected, there will be problems with two of them, the Man and the Biosphere programme and the International Hydrological programme.

Two other programmes, the International Geographical Commission and the International Geographical Correlation programme, are semi-autonomous, although mainly financed through Unesco. Future British contributions are likely to be paid through the Natural Environment Research Council, which is negotiating with the Overseas Development Administration to ensure the cash can come through.

The ODA will probably be able to enough money to cover a contribution to central administration costs of two programmes, as well as some scientific participation.

The biosphere and hydrology programmes are the exclusive province of Unesco, and other major states are unsympathetic to British wish to keep up links with scientific activities without staying the parent body.

Britain has played an important role in the Man and the Biosphere programme, which coordinates environmental research in many countries. The NERC's Institute of Terrestrial Ecology runs the programme's information service.

The United States has retained links with the programme, as it is with the International Oceanographic Commission, after leaving Unesco a year ago, but it has been a major contributor than Britain.

However, the British scientific community have had an important role in the International Hydrology programme, where British experts are managed by the NERC's Institute of Hydrology. This is also a place where UK scientists have widely as consultants in less developed countries.

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## Ulster Green Paper plea

by Carmel McQuinn

It is important that the Northern Ireland universities are not included in the UGC's "selectivity exercise" as it they were part of mainland Britain, the University of Ulster has stated in its response to the Green Paper.

Mr Derek Birley, the vice-chancellor, argues that, while other institutions allocate 30 per cent of their publicly-funded income to research, UU is assumed to spend only 10 per cent of its government funds and therefore cannot compete on an equal footing. "Every UGC committee that visits the university points to the need for greater emphasis on research,

particularly on the large Jordanstown campus.

More funds for research, Mr Birley stresses, could also go far to advance the connection envisaged in the Green Paper between postgraduate higher education and future prosperity. Better opportunities for postgraduate study and research would help reverse the trend where at least 30 per cent of the best qualified graduates leave the province - enabling high quality applied research to take place to the benefit of the Northern Ireland economy.

"Our concern is that not withstanding the inadequate base line of our

initial funding in comparison with other universities, this support may not be forthcoming if selectivity is introduced without due regard for our particular needs."

Higher education could also enhance the province's prosperity if it were given a brief to tackle the whole area of unemployment, the vice-chancellor suggests. The £225 million earmarked for benefits for the unemployed in 1985/86 might be made to yield better value in meeting the total needs of this deprived sector. But it could only do this if allowed work on a collaborative provincial basis, rather than through extensions of separate departmental policies at national level.

While applauding the Green Paper's support for links with industry and commerce, Mr Birley called on the government to wake up to the realities of Northern Ireland which, with the lowest average income of any UK region, has only limited manufacturing industry yet even here, finance could be extended to facilitate a collective approach, involving all government departments and agencies, to support sandwich courses, secure EEC funding and offer agency services overseas.

The UU response rejects unequivocally the paper's suggestion for alternative arrangements "less onerous to the taxpayer" to replace student grants. In the light of Northern Ireland's straitened financial policy, such arrangements, it states, would be better suited to students in the south-east of England than to students in the province.

Mr Birley concludes that the Green Paper "holds no terrors" for UU since, with 4,000 part-time students and courses planned in relation to the public service, it already incorporates many of the features advocated.

Student perceptions were found to be very positive. At least 70 per cent of those interviewed said they would recommend the CPVE to their friends, and 80 per cent felt the programme had aided them with their career plans. Tutors, for their part, felt the CPVE was very relevant to employment prospects - giving students the confidence, relevant vocational skills and work experience to achieve their objectives.

As 1985 was the first year of full operation of the 17-plus award, the target audience for the comprehensive report is teachers, their managers and advisers. "Hopefully the report shows that CPVE has the potential to provide a balanced curriculum of general and vocational development for a wide range of students, irrespective of ability, gender and background," said Mr Mansell.

To improve CPVE implementation, teachers have recommended the introduction of a "taster" week in July, better school-college links, improved induction, better integration between core and vocational studies and the use of a well organized reviewing, tutoring and counselling system from the outset.

"Time was found to be the most needed resource and staff development remains a critical issue," said Mr Mansell. However, in spite of these constraints and the added difficulties of the long-running teacher dispute, schools and colleges moved significantly towards full implementation of the CPVE and coped well with emerging guidelines and new requirements, the study found.

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## Vocational drop-out problem

by Carolyn Dempster

Forty per cent of the 8th students participating in the 1984/85 Certificate of Pre-Vocational Education pilot scheme dropped out before the end of the course, the first detailed evaluation of the project shows.

The Further Education Unit study found the loss largely attributable to employment, with at least a third of the students leaving to take up jobs as a direct result of work experience.

Mr Jack Mansell, chief officer of the FEU and chairman of the project's steering committee, says the relatively high drop-out rate will remain a persistent problem for vocational preparation. Continuation through part-time study or progression on to other further education courses requires urgent consideration by the Joint Board for Pre-Vocational Education for future implementation, he adds.

The study reports that where courses had involved a school-college link, further education had been "demystified", encouraging more students to apply to college than might otherwise have been the case. Several pilot project students were also offered places on college courses with or without formal entry requirements as a result of local negotiation.

Student perceptions were found to be very positive. At least 70 per cent of those interviewed said they would recommend the CPVE to their friends, and 80 per cent felt the programme had aided them with their career plans. Tutors, for their part, felt the CPVE was very relevant to employment prospects - giving students the confidence, relevant vocational skills and work experience to achieve their objectives.

As 1985 was the first year of full operation of the 17-plus award, the target audience for the comprehensive report is teachers, their managers and advisers. "Hopefully the report shows that CPVE has the potential to provide a balanced curriculum of general and vocational development for a wide range of students, irrespective of ability, gender and background," said Mr Mansell.

To improve CPVE implementation, teachers have recommended the introduction of a "taster" week in July, better school-college links, improved induction, better integration between core and vocational studies and the use of a well organized reviewing, tutoring and counselling system from the outset.

"Time was found to be the most needed resource and staff development remains a critical issue," said Mr Mansell. However, in spite of these constraints and the added difficulties of the long-running teacher dispute, schools and colleges moved significantly towards full implementation of the CPVE and coped well with emerging guidelines and new requirements, the study found.

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## overseas news

## France gears up for more research engineers

from David Dickson

PARIS The French government has embarked on a new drive to boost engineering research in its universities and advanced engineering schools, following criticism that too much emphasis has been given in recent years to increasing support for research in the basic sciences.

One of its goals is to double over the next five years the number of engineering graduates who have had direct experience of research techniques before embarking on their professional careers, on the grounds that "training through research" is one of the best ways of stimulating an enthusiasm for new technologies.

This will be achieved primarily through the setting-up of a number of so-called research and training "poles" throughout France. Each of these will draw on the resources of several higher education institutions in the same geographical area, and will specialize in a particular field of advanced technology.

In each case, the "pole" will work closely with local industrial companies. The government provided £1.5

million last year to the scheme, permitting eight such poles to be set up in subjects ranging from biotechnology to robotics. A further 12 are planned for launching in 1986, for which the government has already agreed to provide an additional £3 million.

M. Roger-Gerard Schwartzberg, the minister of state responsible for universities, said in Paris recently that the government hopes that the "poles" — whose full title will be institutions for the training of engineers through research in technology (FIRTECHS) — would each act as a focal point for European-wide networks providing research training in key technologies.

M. Schwartzberg added that he considered the government's initiative to be "a good way to respond to the creation of university/industry research centres which have been set up in the United States."

According to government officials, the new emphasis on engineering research has been motivated by the fact that, in contrast to several other European countries — in particular West Germany and Italy — most of the top engineers in France have received little training in research.

This is primarily because they tend to receive their training from the *grandes écoles*, such as the Ecole Polytechnique, rather than from universities, where most of French research is carried out. The total research budget of the engineering *grandes écoles* in France is £200 million, a figure comparable to that of many individual institutions in the United States.

Only about 40 of the country's 150 engineering schools carry out any significant amount of research. Furthermore, research in universities is usually organized according to traditional scientific disciplines, and research projects are often considered too abstract and specialized by employers seeking to recruit engineering graduates.

One result, according to M. Schwartzberg, is that only 5 per cent of professional engineers in France possess advanced research degrees (*doctorat d'état*), and only 10 per cent have masters degrees showing a basic acquaintance with research techniques. Both figures, he says, are considerably lower than those of France's major industrial competitors.

The new FIRTECHS will attempt to remedy this situation by linking together the research-training efforts of engineering schools and universities in a particular region. They are also intended to provide a means for stimulating more research in both types of institutions into the advanced technologies needed by French industry.

"The modernization effort which France is currently engaged in requires that French engineers should be able to push the frontiers of technological progress which are essential to meet the economic challenges of the future. Training through research is one of the most effective ways of giving them the ability to do this," says a background document prepared by the ministry of national education.

Each of the FIRTECHS will draw on the resources of a group of laboratories which have already developed a national or international reputation, and must have strong links both with local industry and with institutions responsible for the training of engineers, at minimum a major scientific university.

In addition, the different FIRTECHS will each be expected to

explore the possibility of setting up science parks in its specialized field, establish a close working relationship with research-training institutes in other countries, and to set up scientific and technical documentation service for local industrial laboratories and research centres.

The eight FIRTECHS that have already been set up include two devoted to new materials (Paris and Grenoble), two in chemical engineering (Nancy and Compiegne), two in biotechnology (Toulouse and Compiegne) and one each in artificial intelligence and robotics (Grenoble) and robotics (Toulouse).

M. Schwartzberg says that the enthusiastic response that the government has received for its scheme, both from the engineering colleges and from industrial companies, illustrates that "the FIRTECH operation has already been a real success."

Eventually he envisages a total of about 40 such groupings, distributed across the country and offering "an efficient formula for strengthening links between research institutions and industry in advanced technology throughout Europe."

## Attack on the arts parasites

from Geoff Maslen

MELBOURNE

An Australian government inquiry into the arts, education, and training has called on higher education institutions to become hibernation houses for the arts, as well as for artists.

Universities and colleges of advanced education should nurture the human spirit and foster the creation of a climate of thought, opinion and action in which a plurality of cultures could exist tolerantly and all their arts flourish vigorously, a report of the inquiry says.

In a strong condemnation of academics earning their living off the work of practising artists, the inquiry noted that "the artistic professions receive more support than the host". The great majority of Australia's artists made much less from their work than those who studied them.

Only a third of the country's artists received a regular income from arts-related work while the average artist's income was half the average income in the technical/professional category.

The arts now employed as many people as mining or agriculture and provided many opportunities for individuals and small groups to become self-employed. They also created jobs, the inquiry found.

Total government outlay on the arts and cultural activities amounted to more than Aus\$1 billion a year, although in total the government subsidies of the arts amounted to only 13 per cent, compared with 34 per cent for fabricated metal products and 27 per cent for miscellaneous manufacturing.

Although the provision of education in the arts was not excessive, the inquiry found that the arts were not being treated as a profession. But there was a need for first tier programmes which for many people could be "the portal through which a professional career path was entered".

The area most neglected was provision of postgraduate opportunities for practising artists. There were many courses that allowed continuing academic study of the arts and artists, but few that permitted artists themselves to further their skills.

The inquiry called for greater interaction between arts staff and the professions. The most troubling perception it arrived at was that practising artists generally held their colleagues who were teaching in institutions in some disregard.

An overwhelming impression was that institutions had generally failed to develop and sustain professional linkages with practitioners.

The inquiry called for graduate support schemes during postgraduate periods of setting up and getting started as self-employed artists. The most talented students should be given the chance to undertake further study or art practice of up to two years and the scholarships should be equal to other Commonwealth graduate scholarships.

Institutions should also be encouraged to employ graduates as demonstrators, graduate assistants, workshop supervisors, and so on, to allow students the continuing use of the institutions' facilities while furthering their artistic practice and development.

The inquiry suggested the creation of graduate co-operatives through institutions offering low interest loans to student groups.

In a recommendation likely to create some alarm in academic circles, the inquiry argued that institutions involved in arts education training should reduce the number of tenured staff in arts-related teaching areas to 60 per cent.

This would create chances for practising artists to become involved in the training of the new generation of practitioners. While fully tenured staff provided stability and continuity, the remainder would provide fresh interaction with the profession, new experience and achievable role models for students.

Mr. Ohtaka said that the idea of the

## Ireland presses ahead with fees increase

from John Walsh

DUBLIN The Irish government has decided to increase tuition fees in universities and other third-level colleges by 10 per cent next autumn, double the expected rate of inflation.

The decision is in line with the policy of raising the percentage of total college income from student fees.

But it is a disappointment to the provost of Trinity College, Dublin, Dr William Watts, who last month wrote to the education minister, Mrs Gemma Hussey, asking for moderation in fee levels in 1986.

He said that fee levels were oppressive to parents of middle income whose children did not qualify for higher education grants. (The latest increase will put more university courses well over the IR £1,000 a year mark, fewer than a quarter of university students receive grants.)

Dr Watts said that in 1985 fees as a component of Trinity's income, exclusive of research income, reached 23 per cent, five years ago the comparable figure was 12 per cent.

## Classic snub to Dr Bennett

from William Norris

WASHINGTON

Classicalists as a whole seem to be in two minds about Dr Bennett. While they appreciate his advocacy of classical studies as part of a liberal arts education, they are deeply suspicious of his motives and feel that his notion of the classics is outdated, elitist and exclusive.

They suspect that he views them as a bulwark against much of what he dislikes in the modern world, such as black studies and women's studies, for which he withheld grants when director of the National Endowment for the Humanities.

Some are still nursing the wounds caused by a report which Dr Bennett issued last year, in which he deplored the state of college humanities studies and urged students and faculty to get back to traditional ways. The report urged that undergraduates should read Homer, Sophocles, Thucydides, Plato, Aristotle and Vergil.

The trouble with this, say his critics, is that his interpretation of classical values is one-sided, and that he has distorted the reality of classical civilization to bolster his conservative political agenda. They liken his attitude to scholarship, and that of the Reagan administration as a

## Cut-price university threat

The University of the District of Columbia is one of the cheapest places to get a higher education in the United States. Last year its 5,000 full-time students (there are 9,000 part-time) paid tuition fees of just \$462 (£320).

But it also has the highest administrative costs of any public university in America, and the taxpayers of Washington DC have been picking up the bulk of the bill.

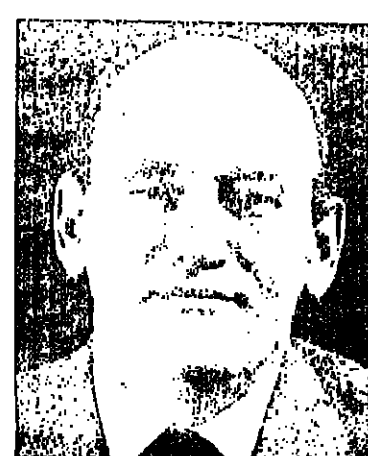
This has put the university, in the words of one of its trustees, "between a rock and a hard place", in its struggle to maintain its independence from political pressure. Last week, after heated debate, the board of trustees set the nettle and raised tuition by 29 per cent to \$600 (£420).

The increase is more symbolic than financially helpful. It will raise only



Mrs Hussey: received letter

For example an official in the public service of medium seniority with full social security and other tax commitments had that fee levels represented a very large call on his or her pre-tax salary.



Dr Watts: plea for moderation

"It could be alleviated by either reductions in total taxation or by tax allowances on fee payments, but I submit that the present fee levels represent a very severe burden which is difficult to justify when one considers the much smaller burdens borne by

parents in other EU countries, including universities in Northern Ireland," Dr Watts said.

Universities suffered the disadvantage that their students, unlike those in other third-level institutions which were often carrying out similar types of instruction, did not benefit by European Social Fund support. Dr Watts wondered if it were really impossible to rectify this situation.

But official sources say it is very unlikely that they will be able to get ESF funding for university courses on the same basis as for the regional technical colleges. The majority of students in these technical colleges get ESF grants for one or two years. This had helped boost the total number of third-level students in receipt of some form of grant to 46 per cent.

The provost's letter added: "I need hardly say that I receive many vehement protests against the present level of fees and the views of successive students' unions are well known."

Indeed they are, and since the latest increase was announced student unions throughout the country have threatened strong protests.

## Rethink on Malaysian integration plan

by Geoffrey Parkins

Chinese-Malaysian educationists have accused the Institute for Strategic and International Studies (ISIS) in Kuala Lumpur of "biased research", following last month's political storm over the government's plans to integrate different races in the country's primary schools.

The government has now agreed to modify and rename the scheme "Integration of Peoples Towards Unity" after widespread protests. There had been a Chinese teacher at the education ministry, and non-Malay politicians had accused the government of trying to eliminate non-Malay cultures.

ISIS is claimed, had already made up its mind and research promises about causes and solutions to the country's race problems, when it announced it was to study race relations in Malaysia by examining the "effects of vernacular primary schools on national unity" last year. The outcome of the study, that the vernacular schools were to blame for racial polarization — was a "foregone conclusion", say Chinese educationists.

Prime minister Datuk Seri Dr Mahatir Mohamed has since assured non-Malays that the "right to learn their mother tongue and open their own schools will remain" but described non-Malay politicians as being "devoid of political capital" for accusing the government of attempting to "eliminate the cultures of the non-Malays" and holding up the government's schools integration plans. All political quarters were agreed that racial polarization was a major problem and that something urgent had to be done, said Dr Mahatir.

## Secret life of the widow of Windsor

Was Queen Victoria, after all, amused? A new collection of memorabilia and scrapbooks acquired by Duke University, North Carolina, suggests that the widow of Windsor may not have been so dull as history has painted her.

The collection, never before displayed in public, was put together by the Queen's Master of the Royal Household, Lord Edward Pelham-Clinton, and covers the period from 1860 until her death in 1901. It contains dozens of royal menus, seating plans, concert, opera and theatre programmes, indicating that the Queen enjoyed surrounding herself with activity, people and the arts.

Lord Pelham-Clinton, a former military officer, left his collection to his favourite niece, Catherine Farnham. In turn it passed down to her grandson, Ronald Godfrey Farnham who sold it recently to the Duke University.

The Duke researchers have not yet explored all the contents, but they have already discovered previously unpublished photographs of Queen's funeral procession and notes to her from Field Marshal Earl Roberts and teenager Pablo Casals.

"This collection is fascinating," said Dr John Sharpe, curator of rare books at Duke's Perkins Library. "It may not give us an intimate view of the royal family, but we can learn what it took to keep the household going, and the liveliness of the festivities. Evidently Queen Victoria did like pretty, decorative things around her."

"We know what she had for lunch on a given day and who ate with her. We even know her train schedules and how long it took her to get from one place to another. I imagine we'll be learning more about court life and British history from the collection for years to come."

## Holy row over Mormon studies

from Benny Morris

JERUSALEM The establishment of a Mormon university centre for near eastern studies in Jerusalem has caused a major and unprecedented crisis in Israel's coalition government and threatens to break up the National Unity Government (NUG) before its term of office expires.

At the end of December, the major coalition partners, the Labour Alignment and the right-wing Likud bloc, overcame a no-confidence motion submitted to the Knesset by the ultra-orthodox Agudat Yisrael party. The Aguda (Agudat Yisrael) is a member of the NUG, and a no-confidence motion by a component of the coalition against its partners in government is unprecedented in Israel's 37-year history.

Israel's religious Jews (roughly 20 per cent of the country's Jewish population), spearheaded by the ultra-orthodox elements represented, in part, by the Aguda, object to the

## History 'in the wrong light'

Yugoslavia's federal secretary for national defence, Admiral Branko Mamula, has called on party historians to deal with wartime and post-war themes from a historical point of view.

Historical facts, he told the Institute of History cannot be concealed from the public, and Yugoslavia has no reason to conceal them from the judgement of the public.

On the other hand, certain writers and historians were misusing recent history, depicting individual events from the war and the socialist revolution and the post-war development of Yugoslavia in the wrong light.

The admiral was clearly referring to

establishment of the centre fearing that it will conduct missionary work and convert Jews to Christianity.

The centre, which is currently going up on the slopes of Mount Scopus in north Jerusalem, next to the Hebrew University's main campus, is part of, or an annex of the Mormons' Brigham Young University of Utah. The centre's director, Dr David Galbraith has flatly and repeatedly denied over the past months — which have witnessed ultra-orthodox demonstrations and rioting protest against the centre — that the institution will carry out missionary work.

Galbraith has assured all and sundry in Israel, including in writing and in testimony before a Knesset committee and Jerusalem municipal bodies, that the centre will only carry out bona fide academic work. "The centre will not proselytize or disseminate missionary information," Galbraith has said.

In a public announcement, the Mormons made clear that they "understand the sensitivity of the Jewish religious community and make a commitment to prevent any act that could be interpreted as such activity."

The issue could have significant political repercussions in the coming months. The Labour-Likud partnership, which together musters some 80 votes on the 120-seat parliament, handily beat the Aguda motion. But neither party wants to permanently alienate the Aguda (or the other religious parties) as their votes will be critical for forming a future coalition government, should Labour and Likud fall out, as is probable.

Neither Labour leader Shimon Peres, who is prime minister, nor Likud leader Yitzhak Shamir, who is deputy prime minister (and foreign minister) is likely to ask for the expulsion of Agudat Yisrael from the coalition government they just voted



against and tried to topple. Earlier last week, conceding something to Jewish religious pressures, the Cabinet set up a ministerial committee, headed by religious affairs minister Yosef Burg, to "study the establishment of the Mormon centre in the vicinity of the Jewish holy site."

The ultra-orthodox, who based their coalition deal usually on the way, have been hampered in its campaign against the centre by the main factors — they woke up to "threat" and began campaigning.

The centre has received all required construction permits, approvals, and Mormons and non-Mormons in the US, have been using a counter-campaign in Asia.

The chairman of the senate for relations committee, Richard L. for example, recently wrote to supporting the establishment of the centre, and described Brigham Young University as "One of America's standing institutions of higher education... I hope you will provide appropriate assistance to the university in its endeavour in Israel."

## Students condemned for crime of 'intellectualism'

The "psychological mechanism" of Albanian students needs "restructuring" according to the Party journal, *Rruga e Partise*. Students, claims the author, Hamit Beqja, often have a "false impression" that the achievement of a degree or diploma is the result of their own intelligence and efforts.

Such "intellectualism" and "individualism" is condemned as a manifestation of "liberalism" which, Beqja claims, can often be observed as early as the higher forms of secondary school. The recommended cure, it appears, is greater political control over students' life, a deeper involvement of students in "socio-economic life" and a rooting out of the "technocratic tendencies" which are "inherent in the social and work position of the intellectuals."

persed with quotations from a leader, Enver Hoxha, criticising students who enter higher studies to get a better job at the end, but for ideological reasons.

Even if they escape through minimum marks, Beqja says, they expect a prestige position in the future. Interestingly, Beqja notes that colleagues are not and cannot be "objective".

In Albania, many major engineering projects, including hydro-electric dams and the newly publicized "youth railway" are largely by students working in the summer vacation, and equipped with little more than a pickaxe and shovel. In the first place, it is difficult to see their "involvement" can be without taking time away from



B. R. H.



A volley of criticism initially greeted the news that the University Grants Committee was to embark on a research selectively exercise in universities, to arrive at a different formulation for annual funding levels. It seemed to many vice chancellors that there was no end to the misery which started with the 1981 cuts and which was furthered by the news that all institutions should expect an annual 2 per cent cut in funding for the rest of the decade; now they were being told to prepare detailed statements of priorities and strengths, plans and aspirations, with the possibility of even more cuts.

Perhaps the most sacrosanct aspect of university life which was threatened by the UGC's May letter was the age-old link between teaching and research, which, it was argued, was an absolute pre-requisite for a university of any kind. The possibility of running a teaching-only department, or of losing whole areas of research was perhaps the most menacing threat ever posed by a central authority. 1981 cuts included. The difficulties of the task were hammered home repeatedly - how to assess a whole department's research output? How would the arts fit into what was clearly a scientific exercise? How could years of work and thinking be condensed into the infamous three sides of A?

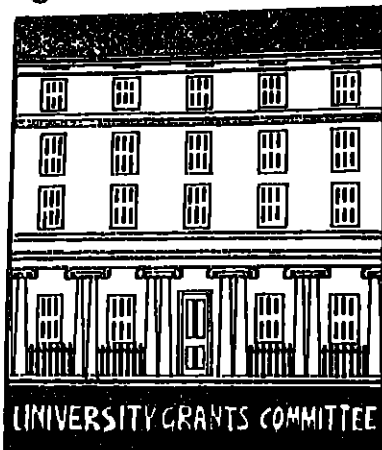
In fact, the criticisms, heartfelt though they might have been, soon petered out. It dawned on all universities that this was a uniquely competitive development, an invitation to fly their flags, and any excess of carping should only do harm to the corporate image. A couple of months after the May letter, Sussex University's senate called for all universities to reject collectively the whole exercise, the strongest yet statement of criticism of selectivity, only for council to quash the motion two days later by referring it back. Success, like all other institutions, duly went to work

## Ill wind in which to fly the flag

Last May, the University Grants Committee published its "Planning for the late 1980s" letter which confirmed that recurrent grants for universities from 1986/87 to 1989/90 would involve an increasingly selective distribution of the research component of the grant.

Universities were asked to submit detailed plans outlining research strengths and priorities, financial projections, overall objectives, student number forecasts and individual profiles of each department.

PETER ASPDEN examines the background to the selectivity exercise, looks at the research plans of individual universities and outlines their financial forecasts, which show a totally transformed university system by the end of the decade.



UNIVERSITY GRANTS COMMITTEE

on responding in time for the November deadline.

The UGC soon made clear the maximum annual adjustment in funding in the initial stages of the exercise was 1.5 per cent, less than many feared, but still significant on top of the 2 per cent. The "escalator" effect became the talk of the summer, while the UGC, to allay the growing incredulity of universities, finally admitted it would have to increase the frequency of its meetings in 1986 to cope with the sheer volume of responses expected. The May letter itself was studied in great detail to look for hints - as for example, in "Gloahilly, if (the UGC) will not transfer research resources between the main subject areas - arts, science and medicine - but individual universities are free to do so where they consider it justifiable."

On the most controversial part of the exercise - asking each university to identify its strengths - the UGC document seemed positively disingenuous: "The committee wishes to know each university's main priorities and assessment of its major strengths. It will not assume that an activity not mentioned is unworthy of mention."

In finalizing their responses, institutions have acted with a degree of speed and efficiency which would surely have been applauded by Jarrett; nearly all vice chancellors, predictably, have stressed how the university had rallied round to the cause and found a remarkable level of unanimity in taking some very difficult decisions. Research committees had acted strongly and impartially; in fact the whole exercise could have been a first Jarrett test - how to sort out performance indicators, streamlined committees and long-term planning in six months flat. But many other parties - usually not to be found in those committees which took the important decisions - told different stories.

The most common complaint has come from lecturers in the arts/humanities and social sciences, who felt alienated from the exercise in the first place. "No matter how impressive our research," one classicist told *The Times*, "we didn't really feel that the university was too keen on putting our name up in neon lights..." To some extent, the criticism is borne out by looking at the responses as a whole. There are a number of entirely predictable and, of course, understandable themes which recur in virtually all of them: the emphasis on information technology as a research strength, the wish to further links with industry, the need to look for more outside funds, the desirability of overseas students. Message received and understood.

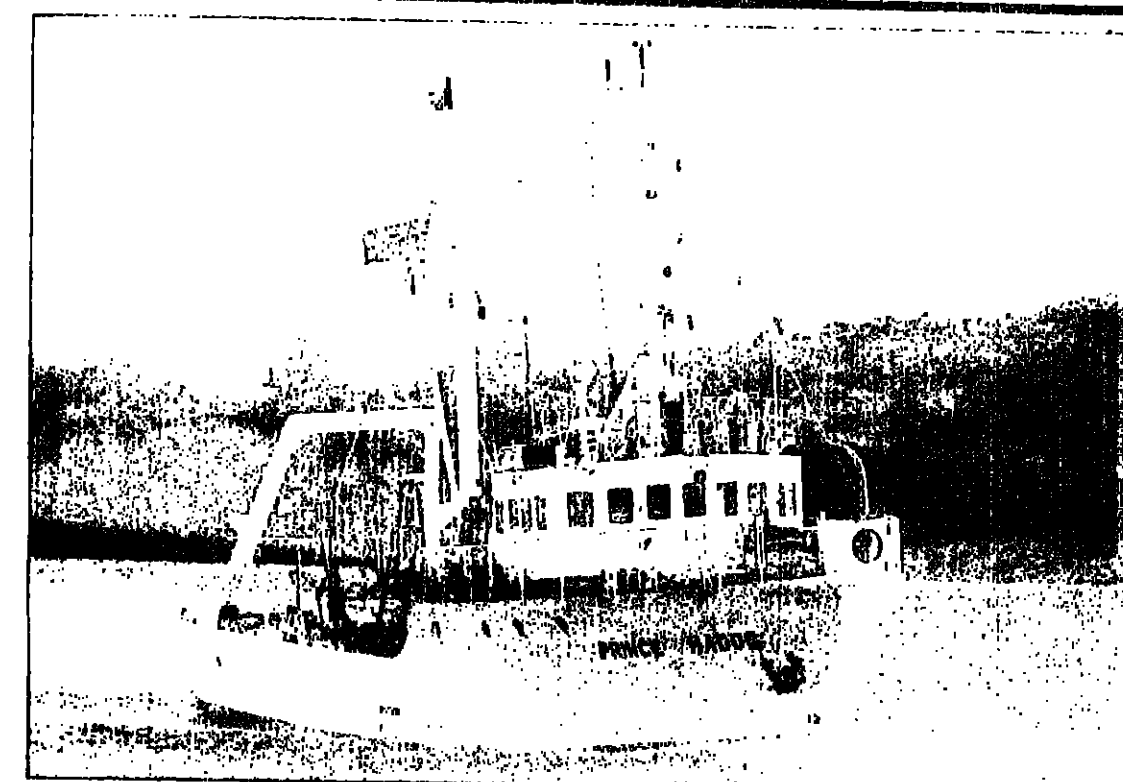
But in other ways, there are telling differences in nuance and attitude. Some universities have gone along with the identification of strengths in toto, and produced concise, workable lists. Others, for example Bristol, point out the different ways in

which these strengths can be secured, without pumping for more of those. Edinburgh begins its summary of research strengths with "The University of Edinburgh, greatest strengths in research lie in number of features, namely..." and goes on to talk about the environment and profile of the university as a whole.

If the UGC was primarily interested in receiving black pictures of financial desperation, so that it could have something tangible at the UGC, it is surely not disappointed. Many universities have assumed a 2 per cent annual funding cut - those who their instructions - and have emphasized the dire state they would be in by 1990 should this ahead.

The public profile of each university has also varied considerably. Some have released their whole document for public consumption, launching it with a press conference in the process. Oxford has been impressively open in its dealings, taking the opportunity to deliver a stinging criticism of Government policy towards higher education. Many institutions have released a short form of the response, sheltering the more sensitive departmental profiles from the public eye. Other have kept the whole transaction a purely private affair between themselves and the UGC. All were asked by *The Times* to submit copies of the responses, and the following is a summary of research strengths, priorities and priorities looks at the distinctive points of those received.

The selections from each university vary in their degree of detail that reflects the diversity of responses themselves. In addition, strengths, institutions were asked to provide forecasts of student numbers, financial forecasts and short statement of overall objectives. Now comes the difficult part: waiting.



The oceanography research vessel Prince Madog, operated by the Marine Science Laboratories, University College of North Wales, Bangor

continued from previous page

monwealth arts and studies, masters' programmes in clinical psychology, in collaboration with Exeter Health Authority, collaborative work between engineering and medicine, medical physics, the new centre for industrial and geophysical fluid dynamics, the western European studies centre, collaborative work between geography and law, the institute for population studies.

"The university needs to have adequate resources to be able to continue to respond to the special economic and social needs of the south-west, associated, for instance, with small businesses, high technology and the traditional industries of farming, mining, tourism and retirement." Lancaster University's response is a gallery are maintained as research sources for the departments of archaeology, zoology, geology and history of art. The university supports the Scottish Universities Research and Reactor Centre and the Millport Marine Biological Station. The institutes of Latin American studies and of Soviet and East European studies are national research facilities. Departments concerned with Celtic language and Scottish history and literature have a "special claim".

Reinforcing mathematical sciences and engineering, which protecting biotechnology, law and accountancy. Amalgamate departments of natural philosophy and astronomy, and those of Latin and Greek.

HERIOT-WATT: Research strengths include three large programmes - optoelectronics, marine technology and petroleum recovery, and information technology. Other strengths are in mathematics (research into nonlinear partial differential equations), the inter play of molecular syntheses, structures and biological activities, economics, management and financial studies, acoustics, microwave engineering, and building construction.

Priorities include the setting up of infrastructures such as the research institutes, to which the university can make a financial contribution. Continuing growth of postgraduate and continuing education courses, eg the MEng in petroleum engineering, the MSc in digital techniques and the MSc in optoelectronic and laser devices.

KEELE: Current strengths in the humanities include American studies, several areas of medieval, modern and architectural history and in 20th-century music. Social sciences strengths in international relations and psychology, sciences strengths in communication and neuro-science, medically orientated, biology/biochemistry, sedimentology, aspects of material science, especially those based on structural and computational studies. Encouragement of interdisciplinary research, for example new centres in Irish studies, life histories, health planning and management and the proposed centre in medical social anthropology and neuroscience and the "striking example of team - and strategic - research in the sciences".

EXTETER: The range of work at facilities makes summary or "impossible". Multi-disciplinary particularly research which encourages. Examples include a new centre for American and

applied statistics, biological science (especially biotechnology), computing programmes in clinical psychology, in collaboration with Exeter Health Authority, collaborative work between engineering and medicine, medical physics, the new centre for industrial and geophysical fluid dynamics, the western European studies centre, collaborative work between geography and law, the institute for population studies.

The costs of running the centre for the study of cartoon and caricature "should now be recognized in the grant allocation to Kent". Aims to establish an institute of management, and planning some internal reorganization to establish larger organizational groups than hitherto.

LANCASTER: The three small creative arts departments (music, theatre studies, visual arts), "special place" because they make the university an important cultural centre for the region.

Outstanding research areas: Natural sciences and engineering; applied statistics; cognitive neuropsychology; connective tissue biochemistry; distributed computing systems; engineering design; environmental biology; environmental chemistry and technology; environmental systems and technology; high energy particle physics; intelligent computer-aided instruction; low temperature physics; mechatronics; numerical analysis; physiology and biochemistry of plants; polymer chemistry. Social studies: crime and the criminal process; defence and arms control; economic sociology; educational research; family, community and welfare policy; international and development economics; international relations; social and economic geography of Britain; social theory. Humanities: applied linguistics; Eastern religions; history of science; natural language processing by computers; 19th-century English literature; modern literary thought and methodology; social history. Management studies: corporate financial disclosure; management development; marketing; operational research; organizational behaviour; soft systems methodology.

LONDON: Carries out 28 per cent of UK university research funded by grants and contracts. Detailed planning of research is best done at level of individual schools and institutes "within the framework of federal academic policy". Unique opportunities for collaboration between schools over the use of expensive equipment, and interdisciplinary initiatives. Senate institutes are a "vital mechanism" for joint advanced work in the humanities and in social and economic studies.

LONDON SCHOOL OF ECONOMICS: The following areas will continue to be developed: Understanding, measurement and explanation of economic change, complex problems of changing social structures, behaviour and attitudes, political and administrative problems in changing societies, international economic and political relationships, the history of ideas in the social sciences, historical aspects of social and political change. Theoretical and methodological problems in the social sciences, law and society, nationally and internationally, urban, regional and environmental aspects of social and economic

change, population studies, planning, strategic management and decision making in organizations, the comparison of different cultural systems.

OXFORD: Research strengths stem from excellence of libraries and museums, which aid inter-disciplinary collaboration - eg molecular and cell biology and its application to medicine, neurosciences and behavioural sciences; links between materials science, engineering, physics and chemistry (science); archaeology, history and classics; ethnology and anthropology; philosophy and law; theology and oriental studies.

Encourage cooperation between earth sciences, atmospheric physics and geography. Attention to common ground between materials science, electrical and electronic engineering, physical chemistry. More resources to two areas where research and scholarship meet: science-based archaeology, the general area from mathematical biology through statistics to econometrics. Improve "general excellence" of libraries to aid arts research. QUEEN'S, BELFAST: Broad subject areas of high international standing - theoretical and experimental physics, chemistry, historical studies, social and political behaviour studies, engineering, medicine and agriculture. More specialized areas - ethnomusicology, palaeogeology, genetic engineering, Anglo-Irish studies, education, law, three industrial units (Northern Ireland Automation Centre, Northern Ireland Materials Testing Station, Wolfson Signal Processing Unit).

Future priorities - develop further in the areas of computer science, engineering, biotechnology and finance/management. Most difficult problem is "reconciling conflict in claims from areas of acknowledged excellence which have a light student load with claims from heavily loaded departments in which research has not had the opportunity to flourish". ST ANDREWS: Strengths in algebra, cell biology, chemical reaction mechanisms, evolutionary aspects of muscle biology, lasers, mathematics of solar and laboratory plasmas, molecular biology of viruses and fungi, neuro science, semi-conductor materials and stellar structure and evolution (science of the histories and of the languages are "areas of special excellence", but "in no department would we regard research as expendable" (arts).

Plans include grouping some arts and divinity departments into graduate schools covering a small number of departmental groups, for example history, modern languages and philosophy. Rationalize teaching and research within a school of life sciences. Form close liaison between Scottish Crop Research Institute and departments of plant biology, biochemistry and microbiology.

SALFORD: Research strengths in materials science and engineering, instrumentation, control and automation, aerothermo-fluid mechanics, advanced manufacturing technology, acoustics of the external and built

## Financial forecasts spell disaster

It is in the universities' financial forecasts up until the end of the decade that the most colourful language of the responses is to be found; words like "disaster", "chaos" and "catastrophe" describe the general situation which most of them expect if the predicted 2 per cent annual funding cut is to go on for the next four years.

Forecasts have been constructed in various ways - some universities have gone through the motions, but added in a footnote that such a forecast would be impossible to achieve without substantial help, or that it would mean the end of the university as a viable academic institution.

Some show adroit touches in the explanatory notes. St Andrews, for example, states: "It is not possible to make a realistic forecast of how successful this process (voluntary staff reductions) might be but we have assumed, for purpose of the UGC return, that a sufficient number of volunteers will be forthcoming and that this will enable us to balance our recurrent income and expenditure by 1989/90."

As the table shows, most universities have chosen to explain their predicament by predicting either massive deficits by 1990, or by illustrating the number of academic job losses necessary to achieve solvency. Such job losses, they stress, are inevitable.

Nearly all of the responses predict increases in student numbers, to take into account the effect of the shift will not be achievable without financial help and without running down towards science and technology, and the projected rise in overseas students (and their much-needed income).



One of the most interesting comparisons to emerge from the financial forecasts is the near dismissal of the Jarrett report on efficiency in terms of achieving any significant savings. Virtually every university claims there is very little room for manoeuvre in this department, having implemented many economies in the wake of the 1981 cuts.

| University                 | Recurrent deficit or job losses required by 1990 |
|----------------------------|--------------------------------------------------|
| Aberdeen                   | £1.45 million                                    |
| Bath                       | £1 million                                       |
| Bristol                    | Freeze almost all vacancies                      |
| City                       | 3 per cent of total jobs                         |
| Durham                     | £2 million or 50 academic jobs                   |
| Edinburgh                  | £6.2 million (accumulated)                       |
| Exeter                     | 60 academic jobs                                 |
| Heriot Watt                | 25 academic jobs                                 |
| Keele                      | £500,000                                         |
| Lancaster                  | 85 academic jobs                                 |
| London School of Economics | £1 million                                       |
| Oxford                     | £544,000                                         |
| Salford                    | £2.3 million                                     |
| Southampton                | 60 academic jobs                                 |
| Strathclyde                | 10 per cent of academic jobs                     |
| Surrey                     | £2 million                                       |
| Sussex                     | 50 posts                                         |
| UMIST                      | 8 per cent of academic jobs                      |
| Warwick                    | £1.7 million                                     |

environment, hydraulic engineering, structural engineering, orthopaedic mechanics (engineering).

SUSSEX: Strengthen research in two fields, to develop existing strengths and to respond to national needs - computing studies and engineering. Other spheres with "high reputations" include physics, chemistry, mathematics and astronomy in the physical sciences, biology and biochemistry, psychology, philosophy and linguistics, history, music, economics (policy studies, international economics, inflation and monetary and fiscal policy and the history of economic thought and policy), politics, international relations and social anthropology in the third world, urban studies and sociology.

The Science Policy Research Unit is a "world leader" in multi-disciplinary and applied social research into the relationship between science and technology on the one hand and economic, social and political changes on the other.

UNIVERSITY COLLEGE OF NORTH WALES, BANGOR: Strengths include electronic engineering, ocean sciences, biological sciences, economics, banking, wood science and Welsh studies. Aims to consolidate interdepartmental units such as the centre for arid zone studies, the institute of molecular and biomolecular electronics, the institute of European finance, the centre of research in social policy.

UMIST (University of Manchester Institute of Science and Technology): Strengths in basic scientific research (mathematics, atmospheric and plasma physics, physical chemistry, mass spectrometry, ophthalmic optics). Fundamental technological research: biotechnology, semi-conductor technology, microelectronics, software engineering, instrumentation and analytical science, control systems, microelectronics, systems engineering. Engineering: computational fluid dynamics and impact mechanics, power systems, diaphragm masonry construction. Materials: electron-optics, textiles, paper science, corrosion and protection centre. Engineering project management, process integration in chemical engineering.

Academic emphasis to maintain "considerable but not exclusive emphasis on science and its application in engineering and technology".

## Research strengths and priorities

ADERDEEN: Strengths include: Humanities - English, history, Celtic in contributions to Scottish studies, French and Spanish, linguistics. Social sciences - institute for the study of sparsely populated areas, sociology, centre for defence studies, geography. Divinity - biblical exegesis and Protestant historical theology.

Special research areas across all departments in the science faculty. Medicine - human nutrition, hyperbaric and diving medicine, diagnostic imaging and epidemiology.

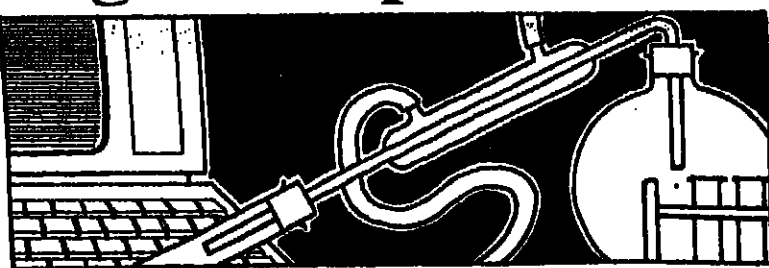
Roman law (and Roman-Dutch law), law and the environment, land economy and joint research with agriculture and forestry.

BATH: Being specialized by charter, "we have been able to concentrate our strengths with the result that our individual activities are stronger than our relatively small size may imply."

Strengths in molecular graphics, interaction between horticulture and plant biology groups, pharmacy and pharmacology (establish new chair in molecular drug design), computer science in mathematics, materials science, semiconductor physics and device technology, optoelectronics and optical communications, integration between architecture and building engineering, thermal power and fluid power/systems in engineering, operations management, education, research on technological change and its influence on industrial and social structures, general and applied linguistic studies, socio-political and cultural developments in contemporary Europe.

BRISTOL: Research strengths are measured in different ways - by output of doctorates (leading departments: chemistry, biochemistry, psychology), outside funding (biggest receivers: chemistry, physics, biochemistry, child health), new blood posts (most in engineering, chemistry, physics).

Areas of particular importance with special funding: computer-aided design, molecular genetics and remote sensing. Changes in research priorities are "reflected in the establishment of new chairs and the decision not to fill others". Newly-established chairs: orthopaedics, ophthalmology, geriatrics, rheumatology, histopathology, molecular genetics, microelectronics, communications engineering, Russian. Disestablished chairs: medicine,



architecture (two), animal respiration. CAMBRIDGE: Major new teaching initiatives are expected in information sciences, management studies and computing, and teaching in classics and oriental studies has been revised.

It has been agreed to merge the departments of parasitology with the department of pathology, and reviews are taking place of the departments of applied biology, applied economics, organic and inorganic chemistry, physical chemistry and of the clinical school.

The aim is to "do everything possible to maintain activity in all the major arts and science subjects" in research. CITY: Develop new activities, particularly those relating to the City of London and the professions, further development in the areas of professions related to medicine. Some rationalization of departments needed - from 1987, departments of aeronautics and mechanical engineering to be brought together under a single school.

Engineering, social statistics and policy, and research relating to the City of London to be strongly developed as areas of research.

DUNDEE: Departments or research groups which "deserve the highest level of university support": biochemistry, biological sciences, mathematical sciences, amorphous semi-conductor group in physics, clinical pharmacology studies in clinical medical departments, epidemiological research units in both clinical medicine and clinical dentistry, centre for petroleum and mineral law studies.

Other priority areas established by peer review include pharmacology, physiology, pathology, medical microbiology, medicine, psychiatry, psychology, the dental school. Strength in interdisciplinary "mingling" between science, medicine, dentistry and psychology.

DURHAM: Research areas of outstanding strength - astrophysics and elementary particle theory, chemical synthesis and spectroscopic characterization, early medieval archaeology, computer control of power systems, English historical linguistics, geophysics and tectonics, Middle Eastern and Islamic studies, Biblical studies, plant biotechnology, regional studies, in north-east England, remote sensing, thin film materials and electronic device technology.

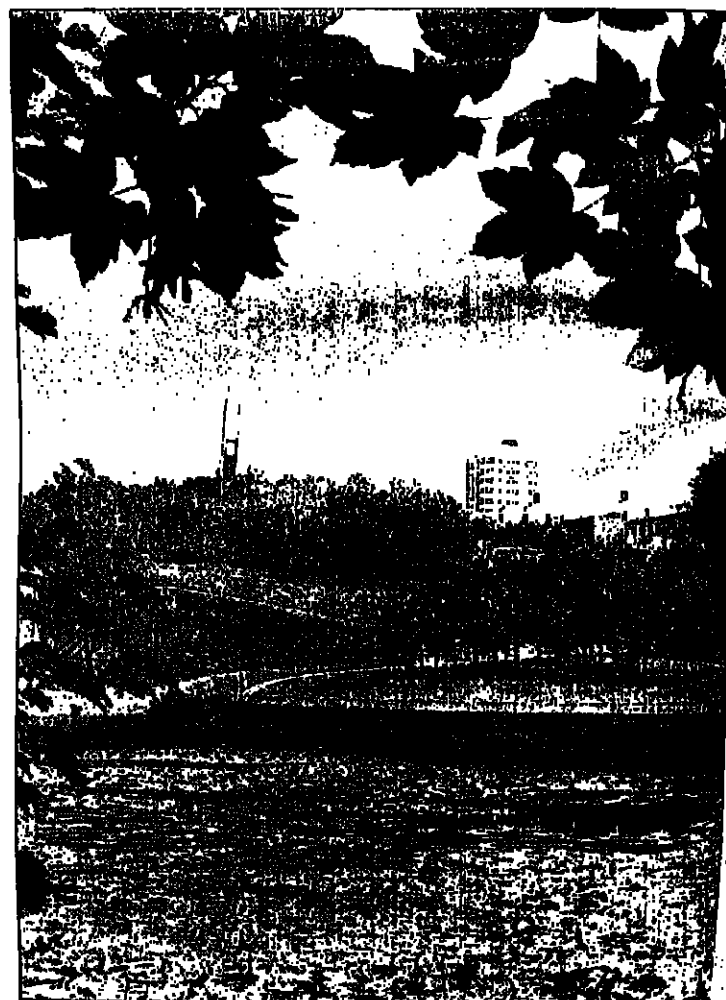
Specific funding requested for library collections (Sudan archive, medieval manuscripts, early and rare printed material), the archaeology museum, the oriental museum and the centre for Middle Eastern and Islamic studies.

EAST ANGLIA: Academic priorities include strengthening of links with John Innes and food research institutes, continue support for school of environmental sciences, closer links between mathematics and physics and chemical sciences, retain disciplinary and geographical range of two major humanities schools - English and American studies, modern languages and European history.

Review of the way history is organized, continue concentration within language-based studies on French, German and Scandinavian studies, commitment to art historical research and scholarship, shift in emphasis to more professionally vocational courses such as law, social work and accountancy, concentration in education on research-based teacher education. Develop new centre for science and technology education.

EDINBURGH: Research activities have developed "more through the opportunistic exploitation of the quality, attitudes and aspirations of its staff than in relation to a pre-determined plan".

Research strengths lie in large numbers of departments, the "high proportion of gifted and effective scholars in the arts-based faculties", large numbers of specific research units.



Lancaster University: important cultural centre

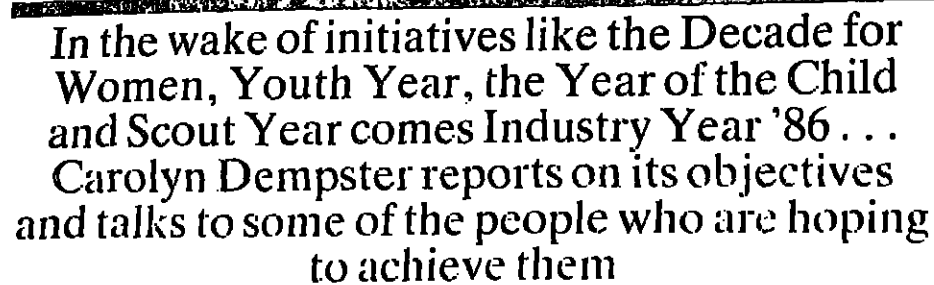
(US, Russian and Latin American studies).

Support for research which recent developments in the accountancy. Lower priorities: combustion and gas-phase kinetics, laser chemistry, comparative biochemistry and numerical analysis in physics, social choice, penology, etc.

EXETER: The range of work at facilities makes summary or "impossible". Multi-disciplinary particularly research which encourages. Examples include a new centre for American and

continued on next page





# Sowing the seeds of industrial revelation

*The English Historical Review* celebrates its 100th birthday this week. Ian Bradley lights the candles



*The author is visiting fellow in general studies, Cranleigh School, Surrey.*

هكذا في الأصل







## BOOKS

## Heroic tales of the English crown

by H. R. Loyn

The Bayeux Tapestry  
commentary by David M. Wilson  
Thames & Hudson, £45.00  
ISBN 0 500 23447 7

The Bayeux Tapestry is not in fact a tapestry at all, but a piece of embroidery, some 230 feet long by 20 inches wide, worked in wool on linen. It tells the story of the immediate background to the Norman Conquest of England as seen through the eyes of an intelligent apologist for the Norman cause.

For nearly half its length the tapestry follows the fortunes of Harold, Earl of Wessex, the strongest man in the English kingdom, sent on embassy by King Edward the Confessor to Duke William of Normandy. Harold crosses the Channel, lands off course in the territory of Guy of Ponthieu, is imprisoned and redeemed from captivity by Duke William. He fights valiantly by the side of the duke in a vigorous Breton campaign, receives arms from him on the field of battle, and swears a solemn oath of loyalty to him at Bayeux. In Norman minds that oath empowered Harold to give full support to the Norman duke in his bid to succeed Edward on the English throne. Harold then returned to England and in spite of his oath is crowned king of the English. The rest of the tapestry is taken up with vivid scenes of William's preparations for the assertion of his rights to England, transporting his men and horses over to the Sussex shore, his landing and establishment of a bridgehead, and with the campaign itself, the battle of Hastings and the resulting death of King Harold and triumph of Duke William. Wear and tear at the end of the tapestry has led to the loss of a section which presumably showed the last phases of the campaign, the surrender of the remaining English leaders and of London, and the coronation of William himself at Westminster Abbey on Christmas Day, 1066.

Given the notorious frailty of the materials with which the Bayeux Tapestry is made, the simple fact that so much of it has survived is little short of miraculous. Inevitably, however, there is a strong likelihood that the tapestry was made to order for Odo, bishop of Bayeux, earl of Kent and half-brother of the Conqueror, and that it was already there in Bayeux in the 1070s. A 15th-century inventory of the goods of the cathedral tells us that it was displayed annually in the nave of the cathedral at the feast of the robes in July. Both 18th and 19th-century historians examined it carefully, copied it, and repairs were made where necessary; but its moves were few and temporary (the upheavals of the French Revolution, the Napoleonic period, and the Second World War). Local loyalties and recognition of its artistic value proved enough to preserve it.

In 1982-3 the civic authorities of Bayeux decided to clean and re-hang the tapestry and superb colour photographs were taken in natural light without the slight distortions inevitable in earlier reproductions. In common with others who have talked publicly about the tapestry over the last thirty or forty years I have always lamented two basic obstacles to demonstrating its beauty and effectiveness: the difficulty of reproducing the colour and the impossibility of conveying in slide or book form the astonishing unity of purpose of the record. The first of these obstacles has now been overcome. Reproduced in this book in 73 plates, at a little more than half the size of the original, the colours have been miraculously preserved. There are seven basic colours, terracotta, blue-green, old gold, olive green, blue, dark blue or black (which seems to have run out after plate 48), and a sage-green. Repairs, now more easily identifiable, were carried out mainly in light yellow, orange and light green. The level of fading is low - and remains a mystery: the dyes which were treated the wool initially were sure masters of their craft. This new publication brings home now as never before the subtlety and delicacy of their achievement. The second difficulty, that of conveying the unity of the



Two sections of plates from *The Bayeux Tapestry*. Below William gives arms to Harold during his campaign in Brittany. Above Harold lands in England again and sets off to present himself to King Edward.

tapestry as a work of art, cannot be completely overcome. It has to be seen on site as a whole, with the viewer able to move and look backwards and forwards, if its full force is to be felt, its unity of purpose, its intricate variations in pace. At times the designer advances the story rapidly, revealing his narrative skill. At others he holds the viewer in his tracks, making him ponder the meaning of events in a still or series of stills. No book or set of slides can quite capture the resulting dramatic strength. Even so the arrangement and the commentary do their best and the reader, willing to apply himself, can take in his stride the occasional disappointment when scenes which should be taken in by the eye as a whole are broken up. He can also respect the attempts made to overcome this weakening of drama by the repetition of part of the preceding scene (as between plates 16 and 17, for example).

So much for the photographic reproduction. What of the scholarly apparatus? Sir David Wilson, director of the British Museum, modestly describes his contribution as substantially a work of synthesis but it is more than that. He presents a clear-cut personal interpretation of the tapestry. He is of the view, surely correct, that it was the work of one distinguished designer, and agrees that it was made in England, a triumph of early Anglo-Norman Romanesque. He recognizes the force of C. R. Dodwell's analogies with *chansons de geste*, the epic literary masterpieces of the Romance-speaking world, but reminds us, too, of the Old English poetic traditions, Beowulf and Maldon. The tone is heroic, and he favours an original heroic setting for it, perhaps the hall of a great magnate. His arguments for date are orthodox, certainly pre-1093, probably pre-1082, most likely relatively soon after the conquest. He sees the evidence for though not perhaps as strong as, as many of us have taken it to be. The artistic evidence points to the south of England as its place of creation but he is not happy with an automatic emphasis on St Augustine's Canterbury, and brings Winchester back into play as well as other recognized centres of the south.

One of the great virtues of Sir David's approach is that he states his case firmly without overstating it, explaining the difficulties without attempting to explain them away. For difficulties there are: the Bayeux Tapestry is not an easy document. Take, for example, the question of ultimate purpose. Sir David illumines the heroic qualities, pointing out that there is no real condemnation of the

Harold, apart from the implicit criticism of the breaking of the sworn oath. Such a view is consistent with lay purpose and secular use, consistent also with the suggestion that the tapestry could have been commissioned by Odo as earl of Kent rather than Odo as bishop of Bayeux. The "apparent" death of Harold, the overt sexuality and brutality of some of the scenes fit well with the idea that the tapestry would be more seen in the hall of a baron than in the move of a church. Fair enough and Sir David's acute comments on, for example, the echoes of visual praise poems that one can sense in the tapestry help to sustain the case.

But there are other ways of looking at it. More emphasis can be put, for example, on the religious content implicit in the central scenes of the drama (plates 29-33), a set of brilliant stills which gives the heart of the Norman case against Harold, a case fully theological though set in a heroic mould. The offer of Edward's crown represents the moment of temptation, the acceptance of it the fall, and the poor twisted crooked figure of Harold at the end of the sequence, crown on head but askew, Halley's comet in the upper margin and the ghost ships in the lower, hints at the retribution to come. Such a rendering would have come naturally to a good monk of St Augustine's at Canterbury if he had been entrusted with the project; and the tapestry with visual emphasis on the oath, on relics and the breaking of that oath would fit into the liturgy of a great church such as the cathedral at Bayeux where its chance of survival would be infinitely greater than in any secular hall. Cathedral servants would be detailed to look after it, to display it as a proud cult symbol at stated times in the liturgical year, to be answerable for any damage. It was a heroic world but also a Christian world that arranged Harold as a usurper and oathbreaker.

This is as may be. Sir David's comments stimulate us to think and re-think our own interpretations. In many fields he makes positive and permanent advance. On buildings, dress, and objects he draws on a wealth of experience not only from England but from the Continent and Scandinavia. On style and art forms he is supremely well qualified to draw the necessary parallels with, for example, the Ringerike style which flourished in the Scandinavian orbit deep into the third quarter of the 11th century.

Sculpture is brought into play and shrewd analogies noted with the dress and accoutrements on the so-called "Sigmund" stone found during the recent excavations of the Old Minster at Winchester. His comments on the



mottes of the Breton scenes are new and important. Historians have for long reflected on the important basic fact that to the designer of the tapestry a motte was regarded as a standard form of fortification. Sir David suggests that they could have an almost formulaic significance, representing any fortified place, certainly in the case of Dol and Dinant fortified towns. This is an attractive hypothesis which makes good sense on artistic as well as on archaeological grounds.

His comments on the fables are shrewd, a reminder of the work that remains to be done on them and on all the marginalia, sometimes impressionistic, sometimes ornamental, sometimes heavily allusive, and at key moments - as with Halley's comet or the use of the archers in the last phase of the battle - dramatically intrusive on the main action. He has a good eye for the absurdities of some of the past pompous comments on the sexy scenes, is rightly sceptical of attempts

to identify Aelfgyva with Emma of Normandy (or Emma of North for that matter). It is pleasing proper weight given to the analysis of Brooks and Waddeley's double portrayal of Harold as standard-bearer in the final scene: all recognize now the highly likely that the designer of the tapestry showed us in the pressed scene Harold struck with an arrow and then killed by the Norman knights as he broke through the defensive around the king.

This is on all counts a splendidly beautiful produced with a reliable text, a credit to the editor and a valuable contribution to 11th-century history and to the study of the tapestry achievement in its own right.

H. R. Loyn is professor of English at Westfield College, London.

## BOOKS

## Literary dissection

Literature and the Discovery of Method in the English Renaissance  
by Patrick Grant  
Macmillan, £25.00  
ISBN 0 333 38354 0

Renaissance Fictions of Anatomy  
by Levon L. Hodges  
University of Massachusetts Press, \$17.50  
ISBN 0 87023 470 6

The methods of scientific inquiry that had been gradually established in the late Renaissance began to pay unimagined dividends in the 17th century. The operations of the natural world became explicable in terms of mechanistic, quantifiable forces that obeyed laws requiring only the remotest divine supervision. The Old Aristotelian and neo-Platonic systems of metaphysics, that expounded hierarchical schemes in which divinity permeated the material world, became increasingly discredited. The methodology of science, empirical and mathematical, relentlessly discovered a materialist universe: even the mind might have a mechanical operation, as Descartes, Hobbes and Locke proposed.

With hindsight, we can recognize that scientific method was steadily driving out spirit, and that the ancient providential God, whose care for falling sparrows and rising souls had sustained countless generations of the unknown First Cause. Calvinist theology, complemented the anti-metaphysical bias of the new science by teaching that God was inaccessible to human reason, and had from before time predetermined the destiny of all mankind. Yet thoughtful men who were living through these changes, even those who were contributing to them, had no very clear sense of the point that was emerging: intellectual inquiry was commendable, yet they also wanted to keep a place for the God of their fathers in a universe that was becoming more and more mechanized.

These tensions form the background to Patrick Grant's absorbing book, which sets itself to explore the ways in which certain imaginative writers responded to the disconcerting intellectual developments caused by the emergence of analytic method. By reaffirming the value of sense impressions and religious impulse, by posing questions about the status of knowledge and experience in a Copernican universe, and about "the relation of

language to the truths of faith", these writers offer "compelling evidence of how humbly unacceptable is the calculus of determinism" that pressed in on them from both science and Calvinist theology.

Grant detects early signs of discomfort in Thomas More, caught between the appeal of humanism and the security of traditional metaphysics. *The History of King Richard III* is read as an engagement with the problems of reconciling secular behaviour with religious morality. But it is in the 17th century that the struggle to honour the spirit while acknowledging the evidence of materialistic science gave rise to an acute self-consciousness which distinguishes the work of the finest writers. Grant's excellent discussion of Jonson, centring on *Every Man in his Humour* and *Bartholomew Fair*, brings up the leading question of how the physical body and the non-physical spirit interact. The old theory of humours involved numerous correspondences with the external world and related sickness and health to matters of morality; the new physiology saw illness as merely a maladjustment of the body machine, independent of any

attempts to probe.

His examples are few, and discussed in detail; they come from one scene of *Julius Caesar*, one scene of *Lea's Twelfth Night* (where he explores the way in which the play creates our sense of the character of Viola), and the RSC's 1975 *Henry V*. Despite his initial emphasis on the importance of the hyper-rational "normal" spectator, only one chapter deals with a play in performance. Elsewhere, he uses a mixture of close reading and leisurely digression which, though it may tend to recreate the agreeably leisurely pace at which one watches a play, often seems not so much a methodology as a mannerism. The account of the assassination scene in *Julius Caesar* is far too long for what it has to say, and the discussion of Viola, though intelligent and sensitive, offers little which could not be achieved by conventional character analysis and sometimes wastes time in solving non-problems. Taylor is good, however, on the way in which the audience's interest is focused and manipulated in the first act of *Lea*, so that our sympathies, in defiance of pure logic or morality, end up being on the side of the king. Here, the close reading is that of an editor rather than a spectator, but much of what he says will be new and illuminating to many readers.

It is in the *Henry V* chapter, however, that his method can be seen at its best. He compares his own perceptions of the RSC production with those of other members of the audience, with actors' and with some critical statements about the play. What emerges is not simply a predictable exposure of

the irrelevant and theoretically incommunicable nature of much academic commentary, but also the fact that actors and directors can be equally irrelevant and incommunicable. A number of the production's ironies and contradictions - some of them I noticed, others not - went completely unnoticed by anyone. This careful deconstruction of what was actually going on in the theatre is extremely interesting, but it also reveals the weakness of the hedonistic theory, if a production can "succeed" by pleasing, even when it fails to communicate many of its intentions, why shouldn't the same be true of literary criticism?

In the end, the book, like the approach, gives pleasure from moment to moment, but its two aims do not really go together. If he really wants to insist on the primacy of theatrical experience, Taylor needs to expand his theory to include productions which give no pleasure and those which give pleasure but for reasons which have very little to do with the play in question. He needs to look for examples of audience response outside Stratford, which is hardly a "normal" theatre. Perhaps he even needs to decide whether the study of theatre necessarily has any relation to the study of Shakespeare. If pleasure is the highest good, why not let scholars enjoy a play in their own way, rather than try to turn them back into first-time spectators?

Lois Potter

Dr Potter is senior lecturer in English at the University of Leicester.



Wootton Lodge in Staffordshire, a picture from Mark Girouard's *Robert Smythson and the Elizabethan Country House* which is now available in paperback from Yale University Press at £8.95.

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moral considerations. Jonson's character, believe like automata, the relationship between their actions and their motivation seems quite arbitrary, language, especially in *Bartholomew Fair*, often gets detached from meaning, and cannot influence the body machine. Yet Jonson the moralist believes in the need for discipline, responsibility and judgement. Out of this dilemma Jonson's writing draws much of its energy as he works for a resolution that does not entirely inhibit the compelling vitality of his characters.

The inquiry continues through Donne's *Anniversaries* in Browne's *Religio Medici*. Browne, as a scientist with old-fashioned leanings, does not seriously face the difficulties of reconciling the mechanism of the new science with spiritual reality; he is instead content to wonder at the paradox, and resign uncritically the assurances of Christian metaphysics. Grant's study concludes in the 1730s, with William Law's struggle to expound a mystical spirituality in a now thoroughly rationalist age.

One Renaissance science that gave impetus to a materialistic outlook was anatomy: the dissected body revealed no trace of a soul, and no likely place for it to inhabit. Grant considers the philosophical re-examination of anatomy, and Deacon Hodges's book looks at its literary consequences and how its techniques were appropriated by English writers intent on opening up their society to reveal inward disease and corruption. Hodges traces a line running from Lyly's *Euphues: The Anatomy of Wit* to Burton's melancholy masterpiece, including two Shakespearean anatomy lessons (*Lea* and *As You Like It*) and writings by Nashe and Bacon. I could not feel that there was sufficient coherence between the works chosen to justify the recognition of a genre. The chapters are linked only in the most tenuous way, by insubstantial verbal ligaments. We are too often and unrewardingly told that the procedure of a literary anatomy, rather than probing the depths of a subject, tends to multiply the surfaces available for inspection. The fragmentation, not knowledge, is the consequence of dissection. The relation of practical Renaissance anatomy to literary counterpoint is too easily concerned with the superficial implications of Vesalius's method. The book builds on false analogies, uses metaphors as transformational vehicles to reach phantasmal destinations; the air is thick with jargon, with words which have the Rabelaisian effect of freezing as they fall.

As a critical demonstration, it suffers the fate of its own subject, for this anatomy discloses no evidence of an animating spirit.

Graham Parry

Dr Parry is lecturer in English at the University of York.

## Near and far

New Perspectives on the Shakespearean World  
by Richard Marienstras  
Cambridge University Press, £27.50  
ISBN 0 521 25265 2

*New Perspectives on the Shakespearean World* was first published in French as *Le Proche et Le Lointain* in 1981. Its issue now in an English translation by Janet Lloyd is well timed to coincide with the contemporary "Shakespeare studies" in Britain. Among these Professor Marienstras's book will occupy a distinguished place. It is a truly interdisciplinary study and ranges widely from anthropology and the law to literature and psychology. Its contents divide into four equally important, topically arranged sections: the forest; sacrifice; the near and the far; and the "other". The first section, "the forest", is devoted to the study of the "other" in Shakespeare's plays. The second section, "sacrifice", is devoted to the study of the "other" in Shakespeare's plays. The third section, "the near and the far", is devoted to the study of the "other" in Shakespeare's plays. The fourth section, "the other", is devoted to the study of the "other" in Shakespeare's plays.

The author admits disarmingly that the links between his chosen categories are "arbitrary ones to the extent that they stem from one man's choice and experience of life". But the scholarly reader need not be alarmed by the prospect of a Barthian literary *jeu d'esprit*. To agree with Marienstras, as we must, that his book is not structured around a driving central theme other than a searching interest in dichotomy, is not to impugn the work's intellectual credibility or its claim to be a genuine contribution to scholarship. It is with considerable skill that the author analyses John Marston's treatise on the "Laws of the Forest" (1592). With the same fact he discusses the intricacies of the Robert Colville/Calvin affair (1607) and assesses the respective ideological implications of both for a reading of Shakespeare's plays. The persuasiveness of this approach stems from the author's manifest responsiveness to the interdependency of social phenomena and literature. The reader learns as much here about Sir Edward Coke's views on the "status of foreigners under James I" as about Shakespeare's works allegedly engaging the "outsider".

René Weis

Dr Weis is lecturer in English at the University of London.

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## BOOKS

## Spinoza from the Latin

The Collected Works of Spinoza, volume one, edited and translated by Edwin Curley. Princeton University Press, £32.30. ISBN 0 691 07222 1. Thought and Nature: studies in rationalist philosophy by Arthur W. Collins. University of Notre Dame Press, £24.95. ISBN 0 268 01856 1.

With the sharp decline of Latin teaching in schools and universities, whole areas not just of classical and medieval but also of renaissance and early modern philosophy have become inaccessible, except in translation, to the great majority of students. At a time when there is a strong revival of interest in the history of philosophy, it is ironic that fewer and fewer can now read the Latin writings of such giants as Bacon, Hobbes, Descartes and Spinoza.

In such a climate there is an increasing need for reliable and philosophically sensitive translations of the great masters, and nowhere is this more pressing than in the case of Spinoza, who wrote the great bulk of his philosophy in Latin. Until recently the Latinist student of Spinoza has been very ill served. The two-volume *Chief Works of Spinoza* by R. H. M. Elwes, which is still widely regarded as the "standard" English version (it is a prescribed text for many university courses) is so riddled with inaccuracies and tendentious renderings as to be a positive menace. Matters improved somewhat with the appearance in 1982 of a competent English version of the *Ethics* by Samuel Shirley, based on the standard Latin edition of Gebhardt, but there has long been a need for a good comprehensive English edition of Spinoza's writings.

The first volume (a mammoth 727 pages) of Edwin Curley's much heralded edition contains four major Spinoza texts: the unfinished early treatise, *De Intellectus Emendatione*; the difficult and controversial "short treatise", *Van God, de Mensch en de zielei Wetland* (probably based on a lost Latin original); the *Principia Philosophiae Renati Descartes* (Spinoza's detailed exposition of the Cartesian system); and Spinoza's greatest work,

and the definitive statement of his metaphysics, the *Ethica ordine geometrico demonstrata*. Also included are 28 letters from the years 1661-1665.

As well as providing clear and accurate English versions of these writings, the book contains a mass of editorial material in the form of footnotes (often so detailed as to amount, at times, to detailed commentary on the text), together with information about the composition of each work and its status in the Spinozan corpus. There is also a considerable amount of biographical and historical data (for example, about Spinoza's friends and correspondents).

No fewer than three indexes are included: English-Latin-Dutch, Latin-Dutch-English and Dutch-Latin-English. In some respects these are more like annotated glossaries than indexes, and they repay detailed study - though using them can be a complicated business. In the English entry under "knowledge", for example, we find three Latin terms (*cognitio, scientia, notitia*) and two Dutch (*kennis, wetenschap*), but no page references. For these we must turn to one of the listed

Latin or Dutch equivalents, but what we find there is not references to Curley's own volume, but references to volume and page numbers of the Gebhardt edition of Spinoza which are indicated in the margins of Curley's version. Since Curley, unlike Gebhardt, orders his material chronologically, this method of indexing does not make life particularly easy for the reader.

The Spinoza specialist will not be fazed by any of this, but the non-specialist reader may find both this and several other aspects of the book's layout quite daunting. When, for example, Curley, in his introductory notes, throws in unexplained references to such items as "Meyer's preface" or "Balling's translation", no cross-references are given (those useful pointers "see above" and "see below" have been strenuously avoided), and hence lengthy sifting through the index of names is required to locate further information on the individuals mentioned. The volume's running heads are also spectacularly unhelpful; no part numbers are given for the *Ethics*, while space is wasted by the insertion of obtrusive modern

labels ("the expositor of Descartes", "the metaphysical moralist") which might be suitable as chapter headings for a critical monograph, but which have no place in a translation.

More judicious editorial and sub-editorial work from Princeton could easily have eliminated these minor but irritating defects, and it is to be hoped that they will be put right in any future paperback edition designed for a wider student audience. Such carrying aside, however, there is no doubt that this volume will be warmly welcomed by all serious students of Spinoza. Professor Curley deserves praise for his translations alone, which - though at times apt to be somewhat over-reverent and literal - maintain a very high standard of care and philosophical awareness; the notes and comments, with their wealth of insights into Spinoza's ideas and his philosophical terminology, are a rich bonus. Unfortunately it seems that we must wait some years more for volume two, which will include Spinoza's political writings; but when the set is complete it will surely become a standard and trusted tool of Spinoza scholarship in the English-speaking world.

Arthur Collins's collection of essays includes papers on Descartes, Kant, Spinoza's theory of mind, Kant's account of contingency, Kant's treatment of space. These stand on their own, but their interesting thematic links, and for all that, from the author's reflections on the relation between metaphysics and epistemology. Descartes is the villain of the piece, furnishing the empiricists with a perfect idealist apparatus whose functions it took Kant to expose. Though Collins is interested in broad sweep of ideas, his intentions and sober analysis is always grounded in detailed study of chosen texts. Nothing special, new emerges, but the book is recommended to any student wishing to deepen his knowledge of many-headed beast known as a philosophical rationalism.

John Cottingham

Dr Cottingham is lecturer in philosophy at the University of Exeter.

## Religion in the head

Religion in the Age of Romanticism: studies in early nineteenth-century thought by Bernard M. G. Reardon. Cambridge University Press, £25.00 and £8.95. ISBN 0 521 30088 6 and 31745 2.

System-building was the favourite intellectual vice of 19th-century Europe, one may well think, and the vaster and more all-inclusive the system, the more messianic and even apocalyptic, the better. The conviction was that ideas finally determine history and, consequently, that if the old Christianity is no longer adequate to the times, then - unless it can be renewed, as traditionalists, Christian socialists, and free-thinking Protestants all attempted in their various ways - it must be replaced by an alternative but no less authoritative creed, by some new "Christianism minus Christianity", as was so aptly said of Comtism.

This age of reason and science also longed for infallibility - and found it. Pagan infallibility was replaced by the infallibility of the Pope, the Pope himself, proclaimed later by the Pope himself. The cautious confidence of actual scientists like Ampère and Claude Bernard was overtaken by the "scientism" of extremists or positivists like Taine and Renan, alleging total reliability and comprehensiveness for the methods of science, extensible now to include even metaphysics or religion. Earlier hopes in the possibility of progress had posited that it was conditional on human endeavour; now the assured certainties of historical evolution were pronounced by countless custodians of history's ultimate truths. Yet others looked for a substitute religion to occultist and illuminist theories or to such world faiths as Buddhism and Mohammedanism or to a syncretist amalgam of them all. And numerous idealist metaphysicians too were supremely confident as they sought, in Mr Reardon's words, "to apprehend the totality of things in their essential unity".

It is upon this last group that his book mainly concentrates. One may regret this delimitation for it excludes so many other attempts in this century to serve somehow both reason and religion; it is surprising, for example, given the book's title, to find no discussion of French Romantics like Constant (who, incidentally, did not write *Paul et Virginie*), Lamartine and Hugo. Yet the restriction does allow the author to concentrate in detail on that part of the total phenomenon which he has selected and to give thorough, detailed exposition, based on close attention to the primary texts, of the ideas of his chosen thinkers.

He turns first to Germany and the Idealism of Schleiermacher, Hegel and Schelling, and also to the Catholicism of Hegel, bringing out well the contrast between the "immanence" of Schleiermacher's attempt to base religion on "feeling", Hegel's belief in "know-

ledge" as the essence of religion itself, the priority he finally gives philosophy over religion as the final form of understanding, and the adoption of Schelling with its antithesis of existentialist themes. He also an interesting comparison between "irrationalism" of the French Idealists and the "semi-rationalism" of the German Catholic theologians. Italy is represented by a single chapter on the "ontologism" of Gioberti Rosmini, especially helpful, however, since devoted to often neglected writers. Three final chapters are given France. Here the author too takes selection from Lamennais, Comte and his religion of humanity, Renan and his religion of science, Simonism or the other "social religions" that inspired so many reformers at this time.

While the presentation remains lucid, it does not always do as much justice as some previous accounts, as may think. In part this is because the author seeks to interpret all movements as illustrative of a single term that "means nothing" in a well-known words of Lovejoy's quotes but that he thereafter uses to confuse diversity of meanings. On a single page, for example, he equates with both "unsecured individualism" and also the view that religion is a social construct.

In part may be because his own tradition is almost exclusively positivist. Lectures approach to the end of religious debates. Most of his titles had "religion in the head" but little Wesley's "heart-religion", and it is thus the more to be regretted that does inadequate justice to Lamennais and to the fortunes of Comtism. In former, he claims, surely unjust reality the last of a score of churches in England alone, at Liverpool, only closed during Second World War, and then as a victim of bombing.

This book gives a sound, selective account of a variety of religion, but we are left with whether these ever moved to social crusading or, alternatively, sounding metaphysical abstractions ever captured anything of a "sense of the holy".

D. G. Charlton

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William James

The thirteenth title of The Collected Works of William James, edited by Frederick Burkhardt, is *Practical Mysticism*. It was published in October by Harvard University Press at £34.25.

## BOOKS

## Achieving the same end

Changing Order: replication and induction in scientific practice by Harry M. Collins. Sage, £20.00 and £9.95. ISBN 0 85199 975 3 and 9717 5.

Among the innumerable images and stereotypes which permeate our thinking, there is the particularly interesting sub-class of those which continue in use, stable and secure, even though at another level of experience we are perfectly well aware that they are false. One such stereotype is that of reason as the royal road to truth and enlightenment. We take reason as our route to the correct scientific theories, or to the best solutions to our technical problems; we imagine that the way to solve our social and political difficulties would emerge if only people would "use reason" or "listen to reason". Yet at the same time we are all perfectly well aware that there are different ways of reasoning, and that where any given way leads depends on the assumptions which are initially accepted when it is employed. Everyday life is one long continuing conflict between different kinds and patterns of reasoning.

Reasonable expert judgements clash and conflict in the same way. In basic science difficulty and controversy arise again and again as different, often contradictory, theories are both defended and justified on the basis of the same body of evidence. Even in the realm of purely formal thought, philosophers and logicians have noticed the diversity of reasoning practices. Carnap felt bound to acknowledge the existence of a whole continuum of inductive methods; others have constructed alternative systems of deductive logic. Everywhere, experience points to reasoning as vari-

able, diverse and compound, yet everywhere the stereotype is of the essential unity of reason.

One of the principal concerns of modern sociology of knowledge is to study acts of reasoning - properly construed, fully legitimate acts of reasoning as evidence of phenomena, and to document their variability both between and within specific social contexts. Harry Collins is a sociologist of knowledge who studies acts of scientific reasoning in this way. He is concerned with the actual inductive practices of scientists, and with the way that variations in those practices can sustain alternative beliefs and convictions, and permit the existence of controversy as an ubiquitous feature of science. The important thing, when reading Collins's book, is to resist the seduction of the stereotype of the unity of reason, and to refrain from assuming that for there to be controversy, one side at least must be unreasonable. Collins's studies are not exercises in error and irrationality; his intention is to illuminate instances of normal scientific practice, not lapses from it. If variations in reasoning are re-categorised as lapses from rationality, then most of the message of his book is lost.

The central chapters of *Changing Order* document practical problems of "replication" in science. Collins describes efforts to build a laser using an existing working instrument as the model, efforts to check and calibrate observations of gravitational radiation by building new detectors with which to repeat existing measurements, and efforts to repeat parapsychological experiments in order to subject some of their more puzzling findings to rigorous tests. Replication may seem an odd subject for empirical research. Obviously, it is an important subject: the trustworthiness of science as a body of knowledge ultimately depends on the reliability and validity of its observations, and hence on their replicability. But it seems a subject quite unworthy of serious study. Surely, there is little to be learned from the boring and tedious business of watching people making and re-making the same judgements, or repeating the same observations, or re-running the same experiment.

Predilections of this kind, however, are misconceived and need to be set firmly on one side. What, after all, is "the same"? Heraclitus insisted that we never step twice in the same river,



William D. Coolidge explains the process of making ductile tungsten to Thomas Edison in 1914, from Leonard S. Reich's *The Making of American Industrial Research: science and business at GE and Bell, 1876-1926* (Cambridge University Press, £25.00).

rightly emphasizing the flux of experience. Crayfish deleted "twice", rightly emphasizing that experience is variable and heterogeneous over even the smallest divisions of time and space. There is no self-evident identity in nature: everything is different from everything else.

How then is scientific inference possible? How can knowledge of past events relate to future instances of "the same" things? How is generalization possible, and the confirmation or falsification of generalizations? One answer is that, although no two things may ever be identical, they may none the less be unproblematically "the same". In some respects they may share "the same" characteristics or properties. But properties and characteristics are a part of experience as much as are the things that manifest them, so that there is no solution to our problem to be looked for here. If every ladybird differs from every other, so also does

the wing-case of every ladybird, and the red colouring of every wing-case, and the black of the black spots on every case, and the area and geometry of every spot, and so on. Crayfish did not merely have big rivers in mind: Crayfish was a philosopher.

What then is "the same"? What sustains our convictions that some phenomena are the same as others? Collins gives the answer now generally accepted within the sociology of knowledge, the answer which is presupposed by most current work within the field. In the last analysis, our sense of sameness is a matter of custom and convention: it is embodied in collectively accepted methods of interpreting experience which reflect, not the direct compelling force of experience itself, but our cultural preferences.

What we count the same as what is a matter of agreement within a community - agreement in the practice of that community. And this means that scientific inference also, whether it moves inductively from evidence to confirmation, or deductively from evidence to falsification, must also be a matter of agreement in the practice of a community. Collins studies such agreement empirically, attempting to describe how it is created and sustained.

The "agreed" nature of sameness is most readily apparent when such agreement is incomplete and contested, when different groups of scientists are in conflict over what is the same as what. Very wisely therefore, Collins has concentrated his empirical work on scientific controversies, and most of the descriptive material in *Changing Order* deals with such episodes. Collins shows, in proper depth and detail, how competent scientists may differ as to whether one observation repeats another, or one instrument measures the same thing as another, or one experiment is the same as another. And he shows scientists with opposed preferences on such

matters arguing their cases powerfully and persuasively. Thus, when Collins concludes that there is no absolutely "best" choice among the different reasoned preferences of the scientists, they themselves have already rehearsed his arguments, and their persuasiveness is immediately apparent.

Needless to say, Collins's conclusion, if it is correct, is profoundly important. Elementary accounts often describe science as a body of problematic theory resting on a mass of unproblematic evidence, the task of scientists is said to be to keep the problematic component, theory, properly disciplined by the unproblematic one, evidence. More philosophically sophisticated discussions, having noted that evidence may itself be problematic, often then tend promptly to forget the point that they move on to discuss the role of "data" in deciding between theories, and the importance of a "critical experiments" in settling controversies. In contrast, Collins displays the problematic nature of evidence extensively and effectively in the context of his materials, and then emphasises the similarly problematic nature of all evidence in his abstract discussion. A picture emerges wherein evidence and theory are equally open to question. Evidence no longer provides a secure underpinning to the advancement of scientific knowledge: it may itself be disciplined and controlled, with strongly entrenched theories being used to identify "spurious" findings, and "mistaken" observations.

That evidence is intrinsically suspect and problematic, like theory, is neither a difficult nor an obscure point, and it is tempting to criticize Collins for labouring it. But so many people find it difficult to face up to the point fully and squarely that he can scarcely be blamed for hammering it home. Collins is challenging what is still one of the standard ways of giving scientific knowledge an epistemologically privileged position, and he rightly expects that many of his readers will wish to resist the challenge: he makes sure that they are hard put to it.

For the general reader *Changing Order* could serve as a useful introduction to many of the themes of modern sociology of knowledge. It highlights central issues and keeps them constantly at the forefront of discussion, and it succeeds in making its empirical materials clear and accessible even to those lacking any background in scientific inference also, whether it moves inductively from evidence to confirmation, or deductively from evidence to falsification, must also be a matter of agreement in the practice of a community. Collins studies such agreement empirically, attempting to describe how it is created and sustained.

Barry Barnes

Barry Barnes is reader in the Science Studies Unit at the University of Edinburgh.

## Reasons as a means to an end

Practical Inferences by D. S. Clarke Jr. Routledge & Kegan Paul, £14.95. ISBN 0 7102 0415 9.

Philosophical questions about practical inference as opposed to theoretical reasoning are the subject of this book. By "practical inference" Clarke means one specific kind of practical reasoning, namely that employed in selecting a course of action appropriate to the realization of a desired aim.

He distinguishes it from three other kinds of inference used in practical thought, which he calls imperative, projective and deontic inference. The first comprises inferences with an imperative conclusion and at least one imperative premise; the second, those in which what an agent is going to do can be inferred from his general plans and goals; and the third, those in which one obligation is inferred from another. Clarke's claim is that practical inference is the fundamental species of practical reasoning, and that the other forms are better understood if one is first clear about practical inference itself. This means that the kinds of practical reasoning studied for their applications in moral philosophy have to wait upon results in the study of practical reasoning; and accordingly

Clarke defers consideration of the moral case until his final chapter.

Clarke's argument is, in essentials, that practical inferences have as premises a statement of the agent's desires plus a description of how they can be satisfied, from which are drawn conclusions stating what the agent should do to bring about the realization of those desires. This analysis is extended to take account of problem cases and those in which the agent has alternative means to his ends; but the basic structure of practical inference remains invariant throughout. Practical inferences are therefore non-deductive.

These claims are contrasted by Clarke with two competitors, "cognitivism" and "prescriptivism". The first has it that the premises stating the agent's desires or preferences must be replaced by assertions which the agent takes to be true, for example that his desires are in his best interests, or is governed by some self-evidently true principle of conduct. The second assimilates practical to imperative or projective inferences, and therefore is an attempt to cast all such inferences in a deductivist mould. Clarke resists both.

In the final chapter, where he extends his analysis to the moral case, Clarke's argument is that moral reasoning differs from practical inference only in having "we" rather than "I" in the premises stating the desires of the agent; which is in effect to say that moral reasoning is based on the community's prudential desire and preferences rather than those of an individual. This makes for an interesting variation in the case for a familiar way of thinking about the source or moral

conduct and obligation.

The book is clearly written and carefully laid out, and it makes few assumptions about the reader's prior knowledge of the field - to the extent, indeed, of being elementary in parts. It has on the whole the appearance of being carefully argued, but it leaves one with the sense that some distinctions and points of view have not been sharply conceived. For example, Clarke distinguishes "desire" from "want" by saying that whereas the two expressions are close in meaning, the first implies a greater degree of awareness on the agent's part of what he or she wants; animals, he says, are said to have wants rather than desires because they lack the ability to manifest (by means of avowals) the kind of awareness which specifically characterizes desire. There seems to be a muddle here arising from a failure to recognize that "want", used in the non-prudential sense as a colloquial surrogate for "desire", does not differ in application from the latter, and that what is at the back of Clarke's mind is the quite different and very large distinction between "desire" and "need", which he does not discuss.

Again, in characterizing "cognitivism" Clarke takes no account of recently articulated versions of moral realism, which have implications for the question of practical reasoning not therefore touched upon by his argument. In this respect the book has a slightly dated air.

A. C. Grayling

Dr Grayling teaches philosophy at King's College London.

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Christopher Hookway is lecturer in philosophy at the University of Birmingham.



## BOOKS

### Cosmic clues

**Meteorites: their record of early solar system history**  
by John T. Wasson  
Freeman, £33.50  
ISBN 0 7167 1701 X

**Catalogue of Meteorites, with special reference to those represented in the collection of the British Museum (Natural History) (fourth edition)**  
edited by A. T. Graham,  
A. W. R. Bevan and R. Hutchison  
University of Arizona Press/British Museum (Natural History), £38.50  
ISBN 0 565 00041 9

The American President, Thomas Jefferson is reputed to have remarked on hearing a description of the fall of a meteorite at Weston, Connecticut, in 1806: "It is easier to believe that two Yankee professors would lie, than that stones would fall from heaven". Even if Mr Jefferson was no more erudite than some of his successors, the science of meteorites has progressed dramatically, particularly during the past decade.

As a result of modern techniques which allow easy measurements of elemental and isotopic abundance to

be carried out in conjunction with careful petrographic descriptions, ideas have advanced from the early simplistic view that meteorites are bits of a single planet which disintegrated to give the asteroids, to the realization that the many distinct groups of meteorites may represent a variety of large and small bodies which once inhabited the solar system. We now even know that some meteorites are secondary debris ejected from the planet Mars or the lunar surface by impacts of primary objects.

In seeking support for their work, it is often claimed by meteorite researchers that meteorites are "the poor man's space probe". Indeed, they promote the exploration of the solar system on a scale which far surpasses any that could be envisaged by a national or international collaborative space programme. Bearing in mind that certain meteorites contain what can only be described as "star dust" (grains which have isotopic compositions directly attributable to nucleosynthesis in stars at different evolutionary stages), it is clear that a view of the universe, not just the solar system, may be forthcoming from the study of what falls to Earth by chance. Indeed, one astrophysicist has dubbed the investigation of isotopic anomalies in meteorites as the new astronomy of cosmochemical memory.

Professor John Wasson has been involved in many aspects of the science of meteorites during the past 20 years and has contributed extensively to the advancement of such ideas. In particular, he has been involved in the taxonomic classification of samples, leading to the recognition and charac-

terization of the minor planets in the solar system. His book provides a comprehensive explanation of the scope of the interdisciplinary subject of meteorites as a means of establishing key facts pertaining to the earliest period of solar-system history.

An important goal of meteoritists has always been to understand our own planet better. Of particular importance is the timescale of events, which Professor Wasson considers in detail: the age of the solar system, based on the study of meteorites, is 4.53 thousand million years. Information about the early Earth has been irretrievably lost because igneous processes have remelted the first terrestrial rocks formed. Nevertheless, we can suppose that the Earth is of a similar age, because measurements of the decay products of a radioactive isotope of iodine in meteorites suggest that all solid objects in the solar system (including meteorite parent bodies) condensed out of the nebula within the first 16 million years, even though that nebula was never well enough mixed to become a totally homogeneous cloud.

Although we reside on the surface of the Earth, we are denied knowledge of the innermost secrets of the planet by our inability to drill more than a tiny fraction of the distance to the centre. Professor Wasson discusses how the study of iron meteorites has allowed us to recognize what remains of the cores of small planets and debate their cooling rates, even if we still cannot identify the heat source(s) which melted and differentiated these objects. At the opposite end of the scale, he also describes how to recognize material which existed as a regolith (or

soil layer) exposed to the solar radiation environment or the alteration processes associated with the passage of water.

Professor Wasson's first love, however, seems to be the most abundant group of meteorites, the chondrites, whose class name reflects the presence of small spherical objects or chondrules (from the Greek word for grain). The diverse chemical compositions and variety of thermal histories associated with this group totally preclude formation in a single restricted part of the solar nebula (for example, the asteroid belt, 2.1 to 3.4 astronomical units from the Sun) and indicate that materials condensed anywhere from Mercury to Neptune could be falling on the Earth. It is the exciting prospect that another key piece in the solution of the solar system puzzle might land at any time which stimulates meteoritists in their endeavour, and clearly gives Professor Wasson enthusiasm for his subject.

Whereas John Wasson's book is a good buy for those wishing to be initiated in the subject of meteorites, the fourth edition of the *Catalogue of Meteorites* compiled by curatorial staff at the British Museum (Natural History) is invaluable to the dedicated researcher, as it provides information about the 2,611 well-authenticated meteorites known up to January, 1984. Problems posed by the glut of samples, located in Antarctica, many of which are from the breakup of large meteorites, have been overcome by including only chondrites weighing over 500 grammes recovered from the Yamato Mountains during the 1977-78 and 1979-80 austral summers.

For each meteorite, in alphabetical order, the catalogue cites the place of discovery (which by convention gives the sample its name) and provides the coordinates of latitude and longitude. Great attention has been paid to the recording of synonyms and the identification of "paired" specimens the may belong to the same event. Each sample is then considered in terms of the basic chemical, textural and structural data, so that the classification assigned is rigorous according to each of the several schemes which have been popular at various times during attempts to group meteorites. Some key literature is cited, particularly relevant to the classification or a description of the discovery. The important for the active researcher, the section giving the whereabouts of known specimens exceeding five per cent of the total mass. The catalogue is supplemented by a separate list of prepared sections in the British Museum and other collections and there are a number of summary lists of the samples grouped by country of discovery, and so on.

There is no doubt that the *Catalogue of Meteorites* has performed a major service to meteoritics. This, however, is not surprising, as the BMNH, with 1,435 samples, holds the most representative collection of specimens worldwide and over the years has been prime sponsor and instigator of meteorite research.

#### C. T. Pillinger

C. T. Pillinger is director of the planetary sciences unit at the Open University.

## Awkward terrain

**The Encyclopaedic Dictionary of Physical Geography**  
edited by Andrew Goudie,  
B. W. Atkinson, K. J. Gregory,  
I. G. Simmons, D. R. Stoddart  
and David Sugden  
Blackwell, £40.00  
ISBN 0 631 13292 9

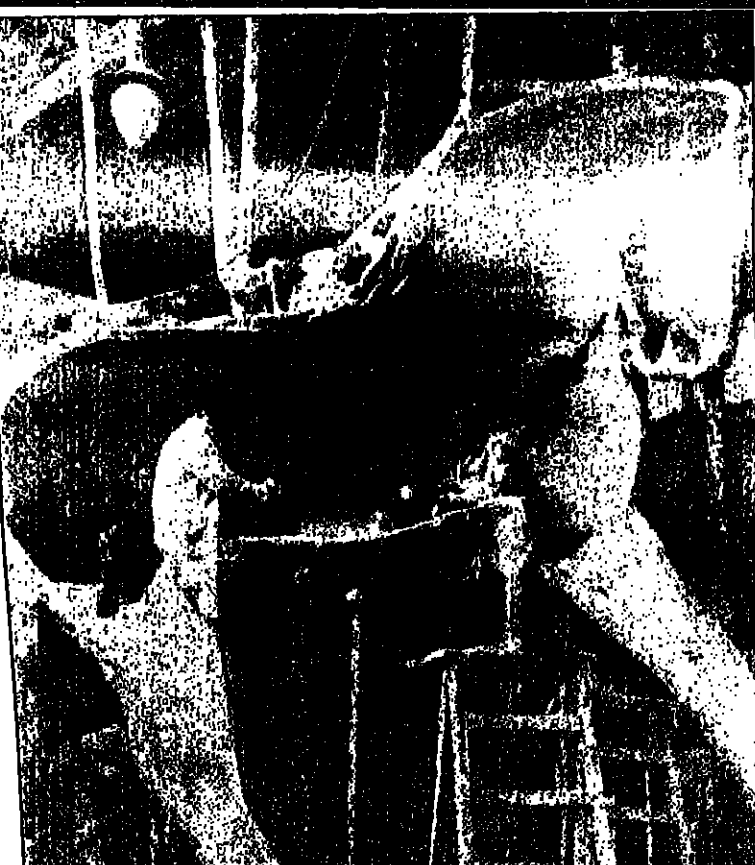
There is no doubt that there are enough awkward terms in common use by physical geographers (and perhaps especially by geomorphologists) to justify the several dictionaries which are available. Some are succinct and reasonably cheap, but any attempt at discursive entries and a reasonable coverage leads to a size and price that limits purchase to libraries and the occasional gift or prize. It was understandable, then, that following the success of the dictionary of human geography, this matching volume should be produced.

The main use made of books like this by students is likely to be to look up the terms in an essay title, or perhaps encountered in reading; and for those purposes this dictionary should serve pretty well. Its main limitation is that many of the definitions are rather short and unsupported by references, so that further quest would have to be through the indexes of textbooks.

It is really a hopeless task to review a volume like this satisfactorily. In daily use no one would read through it, so the reviewer must dip in at random and read half a dozen entries to see what seems well done and what was not known before. Doing this, I soon found that while I quibbled over several of the geomorphological entries, I could not fault those outside my own field, suggesting that for most users the level is about right.

However, as dipping in throws up further terms, I soon met problems. Thus, "red tide" appears in the definition of "outcrop", but it is not included; nor would the one reference on "river ecology" be likely to help. It becomes obvious, therefore, that no model was made of the logical connections between entries; thus, cone-karst can only be defined by looking up "Kegeltkarst" whereas Turmkarst will not be found by seeking "tower karst". "Erosivity" refers to "universal soil loss equation", although neither that nor the abbreviation USLE are here.

Other omissions are puzzling. Erosion and denudation are here, though not translocation. Catena is in, toposequence is missing. Gerlach troughs are defined, but not Young pits, nor Pity's gate. Spelothems are here, but their role in dating cave systems and thus landscapes is ignored.



The sculptor Adrian Jones hosts a tea party inside the plaster cast for the Peace Quadriga surrounding the Wellington Arch at Hyde Park Corner, London, from A. Stuart Gray's *Edwardian Architecture: a biographical dictionary* (Duckworth, £59.95).

The dictionary is primarily concerned with contemporary usage; where this has changed over time, however, the modern definition is usually given without explanation. At times it is implied, though not stated, that one term is preferred: thus, glaciofluvial is defined and will be found by looking up fluvio-glacial. Yet there is no comment on the use of fluvio-glacial on British geological maps. That remarkable term used on one of the Kent sheets, "Nailbourne gravels", is also missing.

It is no doubt useful to have such terms as coquina, poliklothem, diagenesis or butte temon here, but they really need the warning: try and avoid using them yourself. Surprisingly, the source of terms is not indicated - perhaps hardly necessary in the case of dreikanter, but surely valuable for loudback. Occasional signs of idiosyncrasy appear: you may wonder with me whether MRCE is really "a common abbreviation" (if it is becoming so, could it not be suppressed?), whereas the process-based definition for arctic is no case for its inclusion.

A feature of the dictionary is the extended treatment properly given to some terms. The choice must have

been difficult, but does not always seem wise. The long piece on eustasy is useful and well done; but asymmetrical valleys, which pose severe problems of definition and explanation, are dismissed briefly with little beyond the periglacial case. Predator-prey relationships deserve the space, but I doubt whether the essay on habitat will be quite so valuable.

The line drawings and photographs which enliven the pages are undoubtedly useful. The role of the references, however, is less precise: most are very general indications of sources, mostly textbooks. This dictionary would serve a real need if it included references to extended discussions of the term in appropriate books or papers; this would also have allowed reference where appropriate to the first use of a term. Although that is asking for a more academic dictionary than this one aims to be, it is a need that remains to be satisfied.

#### Keith Clayton

Keith Clayton is professor of environmental sciences at the University of East Anglia.

## Erosive element

**Wind as a Geological Process on Earth, Mars, Venus and Titan**  
by Ronald Greeley and James D. Iversen  
Cambridge University Press, £35.00  
ISBN 0 521 24385 8

Since the publication in 1941 of R. A. Bagnold's classic book *The Physics of Blown Sand and Desert Dunes*, our understanding of wind-eroded (and -based) processes and their geological effects has increased greatly. Prominent in this advance during the past two decades has been interdisciplinary research by American geologists, engineers and geophysicists on aeolian processes on Mars, Venus and Titan, and on their relation to Earthly counterparts.

As Greeley and Iversen have both made substantial contributions to that research, it seems appropriate that they should have written the first book which may seriously be regarded as a sequel to Bagnold's book. In *Wind as a Geological Process*, the authors build on Bagnold's still sound principles, testing them using new approaches and extending the results to other planetary environments. Although, as the authors acknowledge, their book does not replace Bagnold, it turns out to be a worthy successor.

Considerable impetus to research into the physics of wind-blown particle movement has come from spacecraft missions to planets having dynamic atmospheres and solid surfaces. In many ways, these planets provide simpler laboratories in which to test the universal nature of relationships without the obscuring influence of vegetation and water. Indeed, the distinctive theme of this book is the important contribution of comparative planetary geology to current understanding of wind as a geological process; and throughout, planetary examples and analogues are used to good effect.

The first of seven chapters discusses the relevance of aeolian processes to Earth and to planetary science and provides a brief account of aeolian features on Earth, Mars, Venus and Titan, the largest of the Saturnian satellites. Setting the format for subsequent chapters, detailed discussion of aeolian processes on Earth is followed by brief discussion of those on Mars and speculation about those on Venus and Titan. The second chapter provides basic coverage of the properties of atmospheric boundary-layers pertinent to sediment transport, and of the processes by which wind-blown particles are produced. Although the treatment is superficial, the chapter underlines the importance of boundary-layer

theory, micrometeorology and physics, as well as geology, to our understanding of sediment transport and wind.

There then follows a significant chapter on the basic physics of particle movement by wind. More than most others, this chapter illustrates the advances attributable to recent investigation of the effects of differing atmospheric densities on the terrestrial (solid-surface) planets. Lucid summaries of threshold conditions for particle motion and methods of predicting particle flux rates are given, together (unusually) with the *dimensionless* equations which govern them. A vortex with an interest in sediment transport will find this a useful summary of recent aeolian applications, available elsewhere only in widespread scientific journals.

Discussion of wind abrasion processes and products - mainly ventifacts (objects shaped by wind) and yardangs (streamlined hills, elongated in the direction of the wind) - in chapter five is followed by a well-illustrated chapter on ripple and dune formation. Though lacking the in-depth treatment available in other volumes, these chapters provide some spectacular examples of these most obvious manifestations of the effects of wind.

The penultimate chapter is in many ways the most fascinating, as it examines the interaction between wind-blown particles and topographical features (such as hills, craters and obstructions) and analyses in the windstreaks, the patterns of changing surface albedo (reflected radiation) apparently produced by such processes. All this is supported by excellent field, laboratory and satellite photographs. The book ends with a chapter giving rare insight into planetary dust storms. Indeed, it is perhaps these two final chapters, together with its general planetary perspective, which give the book its unique flavour. This is a stimulating and a needed book which will help appreciation of the importance of, as a geomorphological process, copiously illustrated with photographs, produced to a high standard, and characterized in the style of a lucid, non-technical style. All with an interest in sediment transport by wind - geomorphologists, agronomists and planetary scientists - will find this state-of-the-art book an essential addition to their bookshelves.

#### Graeme Butterfield

Graeme Butterfield is lecturer in geography and Earth science at the Mary College, London.

A paperback edition of *Climate in History: studies in past climates and their impact on man*, edited by T. M. Wiggley, M. J. Ingram and G. Parker, was published by Cambridge University Press, at £15.00.

This is the second of our termly calendars of events. The next, covering the summer term to the beginning of July, will be published in April; copy should reach *The Times* by March 21. If your event has not appeared below, that does not rule it out for future appearance in our regular events listing on Noticeboard.

### JANUARY

16 to March 20: Who Owns Britain? a series of 10 lecture/discussions to celebrate the 900th anniversary of the Domesday Book, organized by the Department of Extramural Studies, University of London. Full details from Janine Bagot, on 01-636 8000 x 3850.

17: First in the Darwin College lecture series Origins, to be held on Friday at 5pm in the Lady Mitchell Hall, Sidgwick Avenue, Cambridge until March 7. Speakers include Ilya Prigogine, John Lyons and J. Maynard Smith. Tickets £1.50 from Professor Andrew Fabian, 01-3316171.

Ethnic Minorities and Mental Health, a seminar to view and discuss material for training and education, organized by the Mental Health Film Council, Conference Room, 380-384 Harrow Road, London W9 2TU, telephone 01-286 2340.

20 (to March 24): Gerontology: Perspectives, Practice and Politics, a series of 10 lectures to inaugurate the Institute of Gerontology at King's College, London (KQC), organized in association with Age Concern. Details from Information, KQC, Strand, London WC2R 2LS.

22: The Roots of Urban Unrest, at the University of Warwick, sponsored by the ESRC and organized by the Warwick Centre for Research in Ethnic Relations and the University of Leicester.

Continuing Education Unit, Contact Charlotte Wellington 0203 24011.

23: Oral Contraceptives, public lecture at the University of Leicester by Professor R. S. Davidson of City University, a joint meeting of the Royal Society of Chemistry and the Student Chemical Society, to be held in chemistry lecture room B at 4.15pm.

27: Moral Issues in Animal Experimentation, open lecture by Professor Patrick Bateson of the University of Cambridge, to be held in the University of Warwick arts

centre conference room, 7.30pm (to June) South Bank Polytechnic, Institute of Environmental Engineering is offering a series of short courses and seminars on building services. For full details and registration contact Short Courses Co-ordinator, IoEE, Polytechnic of the South Bank, Borough Road, London SE1 0AA, telephone 01-258 8889 x 2112.

### FEBRUARY

3: The Nature of Consent, University of Warwick open lecture by Sheila McLean of the University of Glasgow, to be held in the F.M.I. lounge of Warwick's school of industrial and business studies, at 7.15pm.

6, 7 & 8: Art, Politics and Meaning, a Natthe art section conference, at Montague Hotel, London. Details from John Bevis, Manchester Polytechnic, Didsbury School of Education, 799 Wilmslow Road, Manchester M20 8RR.

10: Software costs should decrease as more work is done by the hardware - true or false? Lecture by J. McNeil, managing director of Datasec Ltd, and P. Doherty, CEOB staff college, to be given as part of the Institution of Electrical and Electronics Incorporated Engineers professional meeting, IEE Faraday Room, Savoy Place, London WC2 at 5pm.

12: ANZUS and the Western Alliance, at the Australian Studies Centre, Institute of Commonwealth Studies, Russell Square, Tel. Brian Hocking on 0203 24166 x 242/489 or BASA on 01-580 5876. (Details of the BASA annual conference in April will be in the next Noticeboard calendar.)

13: The Sutton Hoo Project, an open lecture at the University of Leicester by Mr Martin Carver of the University of Birmingham, to be held in Leicester's Attenborough lecture theatre at 4.30pm.

15: Radical Theatre in the Thirties, a

day conference on the Unity Theatre, at Edge Hill College of Higher Education, Ormskirk, Lancs. Contact Colin Peckhall on 0695 75171 or 0695 421339.

17: Accountability: A consideration of NAFE, one-day workshop organized by the Centre for Educational Development and Training, Manchester Polytechnic, to be held at Shepherds House, Elizabeth Gaskell site, Hathersage Road, Manchester M13 0JA. Details from Miss B. Hollinshead on 061 225 9054.

19: Office Automation: The Human Factors, second annual conference in the educational technology series run by Brighton Polytechnic. To be held at the Gatwick Hilton International Hotel, West Sussex. Details from Hannah Mason on 0323 33130.

22 & 23: Allergy International, symposium on allergies, at Aston University. For details, 06280 4377.

### MARCH

1: Sixth Agricola Conference on British Agriculture and World Need, Wye College, London. Tel. Fiona Dolby on 0233 812401.

Excellence and Value for Money in Education, annual conference of the British Educational Management and Administration Society, to be held at Central London Polytechnic. Full details from British Educational Administration Society Ltd, 1 Lincoln's Inn Fields, London WC2.

6 & 7: Polytechnics and the Challenge of Unemployment, annual conference of Polytechnic Association for Continuing Education, at Crest Hotel, Cardiff. Details from Phil Race, Polytechnic of Wales, Pontypridd, Mid-Glamorgan CF37 1DL.

6 & 7: Electronic Design in the Graphic Arts, Brighton Polytechnic. Tel. Alan Morris 0273 693655.

8: The Institute of Linguists' annual Threlford memorial lecture, Royal

## NOTICE BOARD

Overseas League, St James's Street, SW1. 2.30pm. Mr Peter Fraenkel, controller European services, BHC, on "In Spite of Babel" - some problems in international communications". Enquiries to 01-359 7554.

12: Life in Quest of Narrative, open lecture by Professor Paul Ricoeur, visiting fellow, centre for research in philosophy and literature, University of Warwick, in arts centre conference room, 5.30pm.

21 to 24: Institutions Under Pressure: Responsibility vs Pragmatism in Higher Education, Higher Education Foundation/Higher Education Group annual conference, at St Anne's College.

Oxford, details from Peter Spicer, St. Hill House, Mill Lane, Chichester, W. Sussex PO19 1JN. Tel. 0243 782825.

Three conferences organized by the Careers Research and Advisory Centre. On the 4th, a day conference in London to discuss joint courses with Europe educational institutions, 18th to 20th, admissions to higher education, held in Cambridge; also in Cambridge on 24th and 25th, experimental and vocational education. For details of all these, contact CRAC Conference Office, Lancaster Street Cambridge CB2 1LZ. Tel. 0233 354551.

The Wolfson College lectures in the University of Oxford for 1986 will be held on Tuesdays at 5pm from January 21 (to March 11). The theme is "The nature of Mathematics" and speakers will include Dr Robin Gandy, Professor Roger Penrose, Professor Christopher Zeeman, Sir Michael Atiyah, and Professor René Thom. For full details, contact Wolfson College on 0865 56711.

## Open University viewing

### Saturday January 11

8.00 C.S.E. (General Issues Part 1). To be announced.

10.00 Science Foundation course: Preparatory maths - numbers, 8101, 1M1.

11.00 Open forum: Information programme for OU students.

11.28 Accounting for managers. Not my department. (P67: 1).

### Sunday January 12

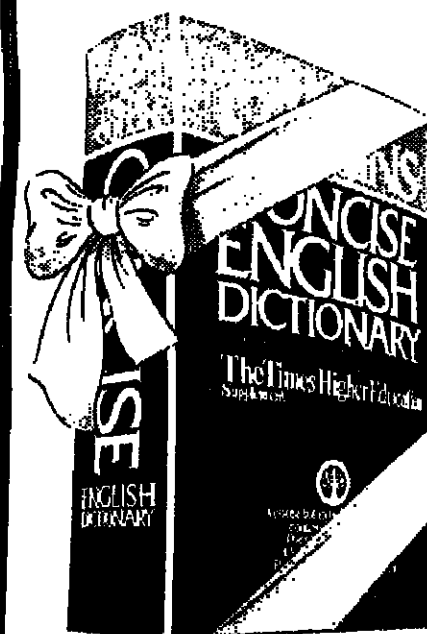
8.00 Resource utilization: buy less, pay less. (P10: 2).

10.00 International marketing: Developing a strategy. (P67: 2).

11.00 Open forum: Information programme for OU students.

8.00 Technology Foundation course: Bridging the gap. (T10: 2).

8.00 Open forum: Information programme for OU students.



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A fair image for a new year: Stuart Frost's work is part of a Gulbenkian-funded art in landscape project in North Wales undertaken by students of the Royal College of Art. (Photo: Lucy Strachan)



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## Universities



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### LECTURER/SENIOR LECTURER MODERN DIGITAL/RF COMMUNICATIONS ELECTRONICS

The College is a residential establishment in Oxfordshire running a range of first degree, postgraduate, specialist and post-experience courses for both civilian and military students. It has an academic staff of around 100 whose duties are exactly those of University Lecturers. There are excellent laboratory, computer, workshop and library facilities and strong research links are maintained with Government R & D establishments, industry and also other Universities. Academic staff are encouraged to develop their own research interests, publish their findings and, where appropriate, read for higher degrees.

The School of Electrical Engineering and Science is expanding rapidly into new areas of IT and RF engineering and now require a lecturer/senior lecturer with up-to-date working experience in the design and/or development of modern electronic devices/components/subsystems as applied to one or more of the following areas:

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Salary will be according to qualifications and experience in the Lecturer range £7,820 - £15,520 or Senior Lecturer £14,700 - £18,415.

Application forms and further information may be obtained from the Personnel Office (RMC) Shrivenham Swindon Wiltshire SN6 8LA. Telephone (0793) 782551 Ext 2421 or 2403.

Closing date for applications 6th February, 1986 Ref SEE&S 13/85.

## THE UNIVERSITY OF LEEDS DEPARTMENT OF CARDIOVASCULAR STUDIES

### BRITISH HEART FOUNDATION CHAIR OF CARDIOVASCULAR STUDIES

Applications are invited for the British Heart Foundation Chair of Cardiovascular Studies, vacant upon the retirement of Professor Linden. The Chair, established in 1973 with an endowment from the British Heart Foundation, is in a department which is widely recognised for physiological research and the clinical application of basic cardiovascular sciences.

Applicants should have an established reputation in cardiovascular research and, preferably, an interest in, and appreciation of, the clinical relationships of such research. For a suitably qualified candidate with a strong clinical background, scope to clinical work in association with an honorary contract at consultant level will be available. The salary will be on the appropriate professorial scale.

Further particulars may be obtained from the Registrar, the University, Leeds LS2 9JT, quoting reference number 106/28. Applications (two copies) giving details of age, qualifications and experience and Medical Councils Association, and naming three referees should reach the Registrar no later than 14 March 1986. Applicants from overseas may apply in the first instance by cable, naming three referees, preferably in the United Kingdom.

## University of Bradford

### LECTURESHIP IN ENGINEERING - Technology & Management

Applications are invited from qualified Engineers to join a multi-disciplinary team in the School of Industrial Technology concerned with teaching and research at the interface of technology and management. The team will be involved in the development of a new degree course in Technology and Management. The successful candidate will be expected to contribute to the teaching of both undergraduate and postgraduate courses in addition to his or her own special field. Closes 28 February 1986.

Annual salary (supplementary) is on an 11-point scale: £9,000 - £26,100 (approx). £14,000 - £25,400; starting equivalent as at December 8, 1985. Starting salary will depend on qualifications and experience.

At current rates, salaries will not exceed 17% of gross income. Housing benefits at a level of 75% of salary, children's education allowances, leave, and medical benefits are provided.

Further particulars and application forms may be obtained from the Secretary General, Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0DP, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong.

## UNIVERSITY OF LONDON CHAIR OF CLINICAL ENDOCRINOLOGY tenable at ST MARY'S HOSPITAL MEDICAL SCHOOL

The Senate invite applications for the above newly established Chair. Applications (11 copies) should be submitted to the Academic Registrar (THES), University of London, Malet Street, London WC1E 7HU, from whom further particulars should first be obtained.

The closing date for receipt of applications is 14 February 1986.

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### LECTURER I

Computer Science  
Management Accountancy  
Mathematics  
Physics

Further details may be obtained from, The Secretary and Registrar, The Southmeath, 809 5NH, whom applications (11 copies) should be sent by 27th January 1986. Please quote reference AJS/85/73THES.

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Qualifications and Conditions in accordance with Memo. V.7 of the Department of Education.

The number of increments which may be granted for previous suitable experience is normally a maximum of five.

Application forms are available from the Principal, Regional Technical College, Dublin Road, Athlone, Co. Westmeath, Ireland with whom completed forms should be lodged not later than 5.00 p.m. on Friday, 31st January, 1986. SAE. (P x 4) should accompany requests for application forms.

Conversing with D.A.E.,  
S. O'Leahain, G.E.O.,  
Office of Committees,  
Bridge House,  
Belvedere Road,  
Mullingar.

## UNIVERSITY OF HONG KONG

Applications are invited for the following posts:

1. Lecturer in Geography  
Applicants should have a higher degree in Geography and should be prepared to initiate a programme of teaching and research in Urban Geography. In addition the appointee will be required to teach in our existing physical geography courses. Closes 19 March 1986.

2. Lecturer in Music  
Applicants should be qualified to supervise and develop programmes at post-graduate level in music education. The appointee will be expected to contribute to undergraduate teaching, and experience in composing, performing and choral conducting would be an advantage. Closes 5 March 1986.

3. Lecturers in Psychology  
Applicants should possess a Ph.D. degree and have research and teaching experience in one of the following fields: social psychology and personality, or neuropsychology and perception. Familiarity with Hong Kong society is preferred. Teaching at both the undergraduate and postgraduate levels will be required. Closes 28 February 1986.

4. Lecturer in Sociology  
Applicants should have a good general background in sociology together with special postgraduate training and/or research experience in criminology, deviance, or related field. The appointee will be required to contribute to the teaching of other undergraduate courses in addition to courses within his or her own special field. Closes 28 February 1986.

Annual salary (supplementary) is on an 11-point scale: £9,000 - £26,100 (approx). £14,000 - £25,400; starting equivalent as at December 8, 1985. Starting salary will depend on qualifications and experience.

At current rates, salaries will not exceed 17% of gross income. Housing benefits at a level of 75% of salary, children's education allowances, leave, and medical benefits are provided.

Further particulars and application forms may be obtained from the Secretary General, Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0DP, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong.

Application forms and further particulars may be obtained from the Registrar, the University, Leeds LS2 9JT, quoting reference number 106/28. Applications (two copies) giving details of age, qualifications and experience and Medical Councils Association, and naming three referees should reach the Registrar no later than 14 March 1986. Applicants from overseas may apply in the first instance by cable, naming three referees, preferably in the United Kingdom.

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## Universities continued

### UNIVERSITY OF OXFORD Department of Engineering Science Readership in Information Engineering

This readership is a new post set up within the Department of Engineering Science, University of Oxford, to provide a focus for research in information engineering. It would be based towards hardware and applications aspects, to complement the software oriented research and teaching in the Department. The holder of the post would be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in information engineering.

The reader may hold the post in conjunction with other academic appointments. Further particulars on both the readership and the college fellowships may be obtained from Professor C. P. Woot, Department of Engineering Science, Parks Road, Oxford OX1 3PJ, to whom applications should be sent, together with the names and addresses of 3 referees to arrive no later than 27th January 1986.

### Donald Pollock Readership in Engineering Science

The holder of this Readership will be expected to undertake research in collaboration with the local Department of Agriculture and his/her colleagues in the Department. The holder will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in engineering science.

The reader may hold the post in conjunction with other academic appointments. Further particulars on both the readership and the college fellowships may be obtained from Professor C. P. Woot, Department of Engineering Science, Parks Road, Oxford OX1 3PJ, to whom applications should be sent, together with the names and addresses of 3 referees to arrive no later than 27th January 1986.

Applications (8 copies, or 1 from overseas) naming 3 referees and without testimonials should be received not later than 28th February 1986 by the Registrar, University Offices, Wellington Square, Oxford OX1 2JD, from whom further particulars may be obtained.

### UNIVERSITY OF DUBLIN Trinity College

### ERASMUS SMITH'S CHAIR OF MODERN HISTORY (1762)

The Erasmus Smith's Chair of Modern History, which carries the Headship of the Department of Modern History, will be vacant on 1 October 1986, following the retirement of Professor K. G. Davies.

Applications are invited from candidates from any branch of Modern History, but candidates with an interest in Modern British, European, American or Commonwealth history will be particularly welcome.

Further particulars may be obtained from:  
G. H. Giltrap,  
Secretary to the College,  
West House,  
Trinity College,  
Dublin 2

to whom formal applications may be made, preferably not later than 15 February 1986.

### Royal Holloway and Bedford New College UNIVERSITY OF LONDON EGHAM HILL, EGHAM, SURREY TW20 0EX

### Two Lectureships in Computer Science

Applications are invited for two lectureships in the Department of Statistics and Computer Science. Candidates should have strong research interests in any area of Computer Science.

Salary in the Lecturer scale £7,820-£14,925 (under review). Further details may be obtained from the Personnel Officer. Closing date for these posts is 7th February 1986.

### University of Birmingham Centre for Computing and Computer Science

Information Exchanges in the Research Community Project  
Two RESEARCH ASSOCIATES

Applications are invited from qualified persons to join the Research Associateship Scheme. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in computer science.

Further particulars and application forms may be obtained from the Secretary General, Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0DP, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong.

Application forms and further particulars may be obtained from the Registrar, the University, Leeds LS2 9JT, quoting reference number 106/28. Applications (two copies) giving details of age, qualifications and experience and Medical Councils Association, and naming three referees should reach the Registrar no later than 14 March 1986. Applicants from overseas may apply in the first instance by cable, naming three referees, preferably in the United Kingdom.

Further particulars and application forms may be obtained from the Registrar, the University, Leeds LS2 9JT, quoting reference number 106/28. Applications (two copies) giving details of age, qualifications and experience and Medical Councils Association, and naming three referees should reach the Registrar no later than 14 March 1986. Applicants from overseas may apply in the first instance by cable, naming three referees, preferably in the United Kingdom.

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## The University of Sydney

Lectureship Senior Lectureship Two positions (Tenurable)

Department of Law  
Reference no. 50/84

Applications are invited for two lectureships in the Department of Law. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in law.

Lectureship (Tenurable)  
Department of Agricultural Economics  
Reference no. 50/87

Applications are invited for a lectureship in the Department of Agricultural Economics. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in agricultural economics.

Lectureship (Tenurable) in Animal Reproduction  
Department of Animal Husbandry  
Reference no. 50/88

Applications are invited for a lectureship in the Department of Animal Husbandry. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in animal husbandry.

Lectureship (Tenurable) in French Studies  
Department of French Studies  
Reference no. 50/89

Applications are invited for a lectureship in the Department of French Studies. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in French studies.

Lectureship (Tenurable) in Crop Production  
Department of Crop Production  
Reference no. 50/90

Applications are invited for a lectureship in the Department of Crop Production. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in crop production.

Lectureship (Tenurable) in Health Education  
Department of Health Education  
Reference no. 50/91

Applications are invited for a lectureship in the Department of Health Education. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in health education.

Lectureship (Tenurable) in Professional Legal Education  
Department of Professional Legal Education  
Reference no. 50/92

Applications are invited for a lectureship in the Department of Professional Legal Education. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in professional legal education.

Lectureship (Tenurable) in Statistics and Computer Science  
Department of Statistics and Computer Science  
Reference no. 50/93

Applications are invited for a lectureship in the Department of Statistics and Computer Science. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in statistics and computer science.

Lectureship (Tenurable) in Urban Geography  
Department of Urban Geography  
Reference no. 50/94

Applications are invited for a lectureship in the Department of Urban Geography. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in urban geography.

Lectureship (Tenurable) in Music  
Department of Music  
Reference no. 50/95

Applications are invited for a lectureship in the Department of Music. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in music.

Lectureship (Tenurable) in Psychology  
Department of Psychology  
Reference no. 50/96

Applications are invited for a lectureship in the Department of Psychology. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in psychology.

Lectureship (Tenurable) in Sociology  
Department of Sociology  
Reference no. 50/97

Applications are invited for a lectureship in the Department of Sociology. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in sociology.

Lectureship (Tenurable) in Technology and Management  
Department of Technology and Management  
Reference no. 50/98

Applications are invited for a lectureship in the Department of Technology and Management. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in technology and management.

Lectureship (Tenurable) in Urban Geography  
Department of Urban Geography  
Reference no. 50/99

Applications are invited for a lectureship in the Department of Urban Geography. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in urban geography.

## Southampton THE UNIVERSITY

Department of Law  
Reference no. 50/84

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Lectureship (Tenurable)  
Department of Agricultural Economics  
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Lectureship (Tenurable) in Statistics and Computer Science  
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Lectureship (Tenurable) in Music  
Department of Music  
Reference no. 50/95

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Department of Professional Legal Education  
Reference no. 50/92

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Lectureship (Tenurable) in Statistics and Computer Science  
Department of Statistics and Computer Science  
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Lectureship (Tenurable) in Urban Geography  
Department of Urban Geography  
Reference no. 50/94

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Lectureship (Tenurable) in Music  
Department of Music  
Reference no. 50/95

Applications are invited for a lectureship in the Department of Music. The successful candidate will be expected to contribute to the teaching of the Department's undergraduate and postgraduate courses in







## Polytechnics continued

# Manchester Polytechnic

**John Dalton Faculty of Technology**  
Following the recent establishment of two new departments, we are now looking for the following:

## Heads of Department (VI)

£18,615 - £20,511

1. Computing (Ref: T/774)
2. Mathematics & Physics (Ref: T/775)

In each case you will be responsible for the academic leadership of your Department and for the effective management of its staff and other resources, liaising effectively with colleagues in other disciplines. Applicants should have a proven record of leadership and achievement, together with appropriate academic qualifications.

## Principal Lecturers

£14,013 - £15,600 (Bar) - £17,619

1. Computing (Ref: T/758)
2. Mathematics (Ref: T/759)

To provide academic leadership and take an active part in research and assisting in the administration of the new Department.

You will provide academic leadership, particularly in application orientated research in mathematics statistics, including the acquisition of external research funding. A proven research record is therefore essential.

3. Physics (Ref: T/767)

To take an active lead in research in an area of current interest to the Department and to hold the Department in a position of academic excellence.

## Senior Lecturers / Lecturers II Two Posts

Computing (Ref: T/773)

SL £11,958 - £14,046 (Bar) - £15,045  
L II £8,076 - £12,945

The Department is particularly interested in candidates with an interest in knowledge based systems, software engineering, computer architecture or formal methodologies of systems analysis and design. Recent research and/or relevant lecturing industrial experience is expected.

For further details and application form, returnable by 29 January 1986, please send a self addressed envelope marked with the appropriate reference number to the Secretary, Manchester Polytechnic, All Saints, Manchester. M15 6BH.

Manchester Polytechnic is an equal opportunities employer.

### Newcastle Upon Tyne Polytechnic

Faculty of Engineering  
School of Electronic Engineering  
Ref: EKF/31/85

### RESEARCH ASSOCIATE/ ASSISTANT FOR AN ALVEY PROJECT ON HIGH PERFORMANCE PACKAGING

Applications invited for posts available in the School of Electronic Engineering in connection with an Alvey project on 'High Performance Packaging'. This award is a collaborative project with major industrial firms and academic institutions. Candidates should have research experience in the following areas: CAD of microwave measurement techniques; electrical modelling and testing of high frequency single and multilayer packages; characterisation of planar transmission lines in mixed dielectric/conductor media. Candidates for the post of Research Assistant should have an honours degree with interest in the above areas.

Salary: Researcher 'A' £6,524 - £7,122 p.a. Researcher 'B' £5,076 - £5,968 p.a.

Applications should initially be made by letter and include a c.v. setting out in chronological order details of education, qualifications, subsequent career and present salary together with names and addresses of 3 referees.

Applications should be sent to and further details are available from: Miss Elaine Thorpe, Admin. Asst. (Recruitment), Newcastle Upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 7RU. Tel: 0161 275 5111. Please quote ref. no. 185.

### Thames Polytechnic

Incorporating Avery Hill College  
School of Arts and Technology in Education

### LECTURER II IN EDUCATIONAL COMPUTING

Required for April 1986, or before, a graduate with experience in teaching Computer Science/Studies and with competence in Computing within Business Studies. The teacher will contribute to computing education courses and will undertake specialist teaching of Computer Science in Secondary courses to include programming, and will aid in the use of computers in research for both students and staff. The teacher will also be involved in PGCE and SEA Business Studies courses.

Salary scale: £9,114 - £15,585 inclusive.

Further particulars and application form from the Staffing Officer, Personnel Office, Thames Polytechnic, Wotton Road, Wotton Bassett, Wokingham, RG40 3BP. Tel: 01353 651111.

### Brighton Polytechnic

Faculty of Art and Design  
Department of Visual Communication

### RESEARCH ASSISTANT

£5,442 - £6,207

To undertake research into the printing processes of film, video and computing as applied to narrative illustration. Applicants should possess a good honours degree in an appropriate discipline.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 186.

Applications are invited from suitably qualified candidates for the following posts:-

### ASSISTANT RECTOR

£18,267-£20,130  
Plus special responsibility allowance

Research and Staff Development (Ref: 1)

### HEADS OF DEPARTMENT

£18,267-£20,130  
£16,902-£18,771

Mathematics Statistics and Computing (Grade VII) (Ref: 2)

Social Work (Grade VI) (Ref: 3)

### PRINCIPAL LECTURERS

£13,749-£17,289

in the following subject areas:-

Accounting and Finance (Ref: 4) Estate Management (Ref: 5) Fine Art (Ref: 6) Law (Ref: 7) Fashion and Knitted Textiles (Ref: 8)

### LECTURER II/SENIOR LECTURERS

£7,926 - £14,763

in the following areas:-

Accounting and Finance (Ref: 11) Business Studies (Ref: 12) Building Surveying (Ref: 13) Construction Practice (Ref: 14) Librarianship and Information Studies (Ref: 15) Mechanical Manufacturing Engineering (Ref: 16) Psychology (Ref: 17) Social Psychology (Ref: 18)



## LIVERPOOL POLYTECHNIC

For further particulars and an application form contact the Personnel Office, Liverpool Polytechnic, Rodney House, 50 Mount Pleasant, Liverpool L3 5ET. Tel: 051 207 5501 ext. 2510/2511. When application must be received not later than Monday 22nd January 1986. Please quote reference number 22/01/86.

Liverpool Polytechnic is an Equal Opportunities Employer and welcomes applications irrespective of race, sex, marital status or disability.

### North East London Polytechnic

Department of Psychology  
Lecturer II/Senior Lecturer in Psychology Full Time

The Department wishes to appoint a Lecturer who has a background in experimental psychology. Applications from those with lecturing experience in the use of psychophysics, behaviour measurement, health psychology will be especially welcomed.

Salary Scale: inclusive of London Allowance - £8,964 - £18,801 per annum.

For further details and application form please contact the Personnel Office, North East London Polytechnic, Ayle House, 159/164 High Road, Chadwell Heath, Romford, Essex RM8 3LX. Telephone 01-490 7722.

Closing date for applications: 27th January 1986. Closing date: 27th January.

Ref: APC/88/85

### NEWCASTLE UPON TYNE POLYTECHNIC

Academic Administration Department  
Ref: APC/88/85

### SENIOR ASSISTANT (EXAMINATIONS AND REGISTRY)

Applications invited for post of Head of the Examinations and Registry section which is concerned with the administration of a range of examinations, admissions and enrolments, ceremonies, awards, academic and student recruitment.

It is expected that the person appointed will be a graduate, or possess degree equivalent qualifications.

NJC Salary and Conditions: Scale 6/01 £8,979 - £10,658 p.a.

For further details and application forms please call our 24 hour telephone answering service (0652 303126) or write to: Miss Elaine Thorpe, Newcastle Upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 7RU. Tel: 0161 275 5111. Please quote ref. no. 187.

Avon County Council is an Equal Opportunities Employer. (19726)

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 188.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 189.

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Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 192.

## Polytechnics continued

## A MAJOR TEACHING AND RESEARCH INSTITUTION OF HIGHER EDUCATION

### LECTURESHIP IN THE DEPARTMENT OF ECONOMICS

Applications are invited for a lectureship in the Department of Economics from candidates with interests in quantitative economics and business analysis and with some competence in the use of information technology in that context. An interest in small firms and in the application of information technology to the problems of small firms would also be welcome. Good candidates with specialist interests in other areas will not, however, be excluded. The Department offers teaching on a variety of courses but the successful candidate's main contribution is likely to be, in the first instance, in undergraduate programmes in the area of Business Studies. Activity in research and/or consultancy will be expected. Candidates should possess a good Honours and preferably a higher degree in an appropriate area and some teaching or industrial experience would be an advantage. Previous candidates will be automatically reconsidered.

Salary Scale: £8,680 - £12,777 (BAR) £13,716 (under review)

Application forms from the PERSONNEL OFFICER, GLASGOW COLLEGE OF TECHNOLOGY, Cowcaddell Road, Glasgow G4 0BA (tel: 041-331 2043) to be returned within 14 days of the appearance of this advertisement.

## GLASGOW COLLEGE OF TECHNOLOGY

A Scottish Central Institution

## THE QUEEN'S COLLEGE GLASGOW

1 Park Drive Glasgow, G3 6LP. Tel: 041-331 8141

### CO-ORDINATOR CONTINUING EDUCATION

(Senior Lecturer)  
Salary Scale £12,777 - £16,104 (under review)

Applications are invited from suitably qualified graduates experienced in the field of continuing professional development. The College is introducing post qualifying studies from mature students working in the professions, commerce and industry. Further details and application forms are available from the Secretary & Treasurer at the College. Closing date for receipt of applications: 31st January 1986.

A Scottish Central Institution

### Bristol Polytechnic

Fine Art Department  
Applications are invited for the following post, duties to commence as soon as possible.

### LECTURER II/ SENIOR LECTURER IN SCULPTURE

Ref no L/139

To take responsibility for studies in the School of Sculpture, B.A. (Hons) course. The successful candidate will be expected to develop the creative and conceptual skills of students and to ensure the appropriate use of materials for practical work in the bronze foundry, in wood and metal workshop. Candidates should have a record of successful work of their own, including exhibitions. Experience of teaching B.A. (Hons) students would be an advantage.

Salary Scale: £11,733 - £15,785 (Bar) - £17,765 (under review)

For further details and application form, returnable by 29 January 1986, please send a self addressed envelope marked with the appropriate reference number to the Secretary, Bristol Polytechnic, All Saints, Manchester. M15 6BH.

Manchester Polytechnic is an equal opportunities employer.

### City of London Polytechnic

Ref: L/140

### LECTURER II/ SENIOR LECTURER IN PAINTING

Ref: L/140

To teach painting on the B.A. (Hons) course. The successful candidate must have wide experience in the use of oil, water and mixed media. He/she must be a practising painter.

Salary Scale: £11,733 - £15,785 (Bar) - £17,765 (under review)

For further details and application form, returnable by 29 January 1986, please send a self addressed envelope marked with the appropriate reference number to the Secretary, Bristol Polytechnic, All Saints, Manchester. M15 6BH.

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Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 193.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 194.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 195.

## PAISLEY COLLEGE

A Scottish Central Institution

### DIRECTOR OF ALCOHOL STUDIES CENTRE

### Department of Applied Social Studies

Applications are invited for the above post. The principal function of the Alcohol Studies Centre is the provision of advanced education and training about alcohol and alcohol related problems. The Centre offers a full-time postgraduate course in Alcohol Studies and is committed to the provision of an extensive range of short courses and in-service training on addiction behaviour.

The successful applicant will be a graduate in social or health related sciences with relevant practical and teaching experience. A commitment to research and the ability to disseminate research findings are important aspects of the post.

This appointment will be initially for a fixed term of five years and will be made at Senior Lecturer level, salary scale £12,777 to £16,104 (review pending).

Application forms and further particulars are available from the Personnel Office, Paisley College of Technology, High Street, Paisley PA1 2BE (Tel No 041-887 1241 Ext 230).

Informal enquiries to James Adams, Associate Head, Department of Applied Social Studies (Ext 240).

For further details and an application form, returnable by 29 January 1986, please send a self addressed envelope marked with the appropriate reference number to the Secretary, Bristol Polytechnic, All Saints, Manchester. M15 6BH.

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Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 196.

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Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 222.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 223.

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Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 228.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 229.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 230.

## Manchester Polytechnic

Department of Electronics and Telecommunications

### SENIOR LECTURER/ LECTURER II

Applications are invited for this new appointment, particularly from graduates with recent industrial or research experience in at least one of the following areas: Communications, Architecture, Computer Networks, Data Communications, VLSI and Microelectronics, Systems Design, Intelligent Systems, Robotics.

The Department is investigating its work in various aspects of Computer Aided Design and preference will be given to applicants able to make a contribution to these developments. The successful applicant will be required to undertake research, consultancy and collaborative activities with industry.

Salary Scale: Lecturer II £7,926 - £14,763; Senior Lecturer £11,733 - £15,785 (Bar) - £17,765 (under review)

Application forms and further particulars are available from the Personnel Office, Paisley College of Technology, High Street, Paisley PA1 2BE (Tel No 041-887 1241 Ext 230).

Informal enquiries to James Adams, Associate Head, Department of Applied Social Studies (Ext 240).

For further details and an application form, returnable by 29 January 1986, please send a self addressed envelope marked with the appropriate reference number to the Secretary, Bristol Polytechnic, All Saints, Manchester. M15 6BH.

Manchester Polytechnic is an equal opportunities employer.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 231.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 232.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN2 4AT. Tel: 01273 827511. Please quote ref. no. 233.

Further details and application forms from the Personnel Department, Brighton Polytechnic, Moulton Building, Brighton BN







## Administration continued

## N.N.E.B. DIRECTOR c.£25,000

As the Chief Officer of the National Nursery Examination Board the Director will carry responsibility for the conduct of the affairs of a major examining and validating body at national level. S/he will play a central role in maintaining a major programme of development to assure the quality of the training of Nursery Nurses both through the long established NNEB Certificate course and through the rapidly developing Certificate in Post-qualifying studies.

The potential candidates will have the personal and intellectual qualities necessary to represent the Board's interests at national level, as well as the high level of managerial and entrepreneurial skills needed to provide leadership to a successful self-financing body operating in the volatile fields both of vocational education and training and services to young children.

It is expected that the successful candidate will take up office in May 1986. The post is superannuable and car loan and essential user allowance are available.

Further details from Michael Stanton at The National Nursery Examination Board, Argyle House, 29/31 Easton Road, London NW1 2SD. Closing date for completed applications: 31st January 1986.

(1022)

## Intermediate Technology Development Group Ltd TRAINING ADVISER

The Group is engaged in helping to create productive enterprises in rural areas of developing countries. It is seeking an experienced Training Adviser to assist the staff of its Operations Division to establish and disseminate the use of appropriate technologies for this purpose.

H/she will be responsible for helping staff to recognise training needs and to plan and introduce specific management and skills training relative to their programmes, using local resources where available. H/she will be responsible also, for developing a general capacity within the Group to provide training and education to other agencies, in support of its interests and objectives.

Professional training officers with experience of small rural enterprises in a developing country context will be preferred.

This is a senior position located at the Group's Headquarters in Rugby. Salary will be in the range £10,000-£12,500 p.a.

For a job description send detailed c.v. to Mr. A. Mallett, Administrator, Intermediate Technology Development Group Ltd, Mysen House, Railway Terrace, Rugby, Warwickshire. CV21 3HT.

(7045)

## NATIONAL CHILDREN'S BUREAU ASSISTANT DIRECTOR (RESEARCH) Salary scale £15,997 - £18,639

The National Children's Bureau is an independent organisation concerned widely with children's needs and with services for children and families.

We are seeking an Assistant Director (Research) whose primary responsibility will be the programme of research that the Bureau carries out for the Department of Health and Social Security, currently covering aspects of adoption, services for children in care and the under fives. The Assistant Director will also have responsibility for setting up new research projects in related fields and seeking funds for this. Candidates for the post should have proven ability as a researcher in relevant fields; successful experience of supervising or managing research and of preparing research proposals; the ability to communicate effectively with non-researchers; and an interest in an inter-disciplinary perspective.

Further particulars and application form available from: Sally Whitehead, National Children's Bureau, 8 Wakley Street, London EC1V 7QE. Tel: 01-278 9441. Closing date for completed applications - 7 February 1986.

(74143)

## The School of Pharmacy University of London DEPUTY SECRETARY AND FINANCE OFFICER

For the responsible for the financial administration of one of the main institutions of the University of London, and to deputise for the Secretary of the School's Finance Committee.

Applicants should have membership of a recognised professional institute and some years experience, preferably in a UK university or college.

Salary within the academic related grade 2 scale £19,142 - £23,526 p.a. (under review) plus London Allowance of £1,000 p.a. Membership of the Royal Society of Medicine is required. Applications in writing, including two copies of curriculum vitae, giving the names and addresses of three referees by 28 January 1986, quoting Ref: DSFO, to: Assistant Secretary, Personnel Office, School of Pharmacy, University of London, 200 Brunswick Square, London WC1N 1AX. H13 (91814)

H13

H13

## Association of Commonwealth Universities

Applications are invited for the post of

## ASSISTANT SECRETARY

of the Marshall Aid  
Commemoration Commission

to be taken up in mid-1986. The successful candidate will be responsible to the Secretary General of the A.C.U. (designated Executive Secretary of the Commission) and will handle the administration of the Marshall Aid Scholarships. The position is one of considerable responsibility with a heavy workload involving all aspects relating to the selection, placement, progress, welfare and completion of studies of the scholars. Candidates should have good administrative skills (Secretarial skills would be a bonus) and experience gained in a higher education context; be able to communicate effectively with senior university staff; both administrative and academic; and be capable of establishing working relationships with the scholars.

Salary in the range £19,140 to £23,526 p.a. London Allowance. Superannuation U.K. 1985.

Further particulars from Personnel Officer, A.C.U., 20 Gordon Square, London WC1H 0DP. Applications should be sent to arrive not later than 14 February 1986. (91789)

(74143)

## DIRECTORATE OF EDUCATION AND RECREATION LIBRARIES AND CONTINUING EDUCATION DIVISION CAREERS SERVICE

## Careers Officer (Higher Education)

Salary: £10,632-£11,295 per annum inclusive

We are seeking an experienced and well qualified Careers Officer to join the Advisory Team at Kingston Polytechnic. Candidates should preferably have had three years experience in the Careers Service and be able to demonstrate an ability to deal with the information and guidance needs of academic pupils/students.

This post is exempt from 'Ringfence' arrangements. However, applications from employees of the GLC or MCC's with relevant experience will be welcome.

For further information and application form please contact the Director of Education and Recreation, Guildhall, Kingston upon Thames, Surrey KT1 1EU. Telephone 01-546 2121, Ext. 2316. Please quote reference CO/HE.

Closing date: 31st January 1986.

Re-advertisement. Previous applicants will automatically be reconsidered.

## ROYAL BOROUGH OF KINGSTON UPON THAMES

(74137)

## The Royal College of Nursing ASSISTANT REGISTRAR

(ADMISSIONS)

Salary £9,139 - £10,633pa  
Inclusive of London Weighting Allowance.

Applications are invited for the post of Assistant Registrar (Admissions) in the RCN's Institute of Advanced Nursing Education. The postholder will arrange publicity for courses and workshops, deal with enquiries and be responsible for the administration and development of the Institute's admissions procedures. Other duties will include some committee work and arranging accommodation for courses run at external venues.

Previous experience of administrative work, preferably in a postgraduate setting is necessary. Experience of student admissions work in college or polytechnic would be a strong recommendation and some familiarity with computerised student records would be helpful.

Application forms and further details may be obtained from the Principal Personnel Officer, The Royal College of Nursing, 20 Cavendish Square, London W1M 0AB. Tel: 01-488 3333. Closing date for receipt of completed forms: 27th January 1986.

The RCN actively discourages smoking in all its premises.

(74138)

## Independent Colleges



## REGENT'S COLLEGE LONDON

Regent's College, an independent educational charity, in cooperation with Regent College, Illinois seeks to strengthen its administration with the following new positions:

### Senior Development Officers

Two posts: one to be based in London and the other in Rockford, Illinois to take responsibility for the fund-raising campaigns in the UK and USA respectively. Minimum of 5 years development experience, preferably including a capital campaign. Salary likely to be in range £18,000 - £18,000.

### Assistant/Associate Dean of Academics

To coordinate student recruitment for an undergraduate programme. Administrative experience needed in admissions or related areas. Familiarity with international education and knowledge of one European language other than English desirable and willingness to travel essential. Commencement date: 1 July 1986. Salary £14,000 - £16,000.

### Controller

To manage the finance office and related areas. Qualified Accountant required. Post available immediately. Salary £16,000 - £16,000.

Applications not later than 31 January 1986 for all three posts to: Secretary, Regent's College, Inner Circle, Regent's Park, London NW1 4NS.

(74147)

## Courses



## M.Sc. Physical Education and Sports Science

The Department of Physical Education and Sports Science will accept applications for this one-year full-time course commencing in October 1986. The course is structured to provide teachers, coaches and lecturers with the opportunity for advanced study.

Write for further details to Mr. F.M. Holliday, Department of Physical Education and Sports Science.

Loughborough Leicestershire (74136)

## Overseas

## UNIVERSITY OF NATAL DEPARTMENT OF BOTANY PIETERMARITZBURG

Applications are invited from suitably qualified persons regardless of sex, religion, race, colour or national origin for appointment to the post of:

## CURATOR OF UNIVERSITY OF NATAL HERBARIUM/ SENIOR RESEARCH FELLOW

There exists a vacancy for a suitably qualified person to take on the responsibility of Curator of the University of Natal Herbarium. The post holder will be responsible for the day-to-day running of the Herbarium.

The Department of Botany has a new and well equipped herbarium which occupies a house over 50,000 specimens of flowering plants, ferns and mosses. In addition there is now a good collection of marine benthic algae totalling over 8,000 species. The Herbarium and the Department of Botany is well equipped for taxonomic research. Good electron micro-facilities are available in the John Bawa Life Sciences Building.

The successful applicant should have a minimum qualification of a Ph.D. or equivalent relevant experience, should be an active research worker, and have experience in curatorial work. H/she will be expected to participate in an active research programme, to supervise postgraduate research and to undertake a limited amount of undergraduate teaching and demonstrating.

The appointment carries an attractive salary package, details of which are obtainable from the Staffing Section on request (phone 031-433520). The salary offered will be determined according to the qualifications and/or experience of the successful applicant.

Application forms, further particulars and conditions of service, are obtainable from the Registrar, University of Natal, P.O. Box 378, Pietermaritzburg, 2000 South Africa, with whom application of the prescribed form must be lodged not later than 7 February 1986, quoting reference FMB 86/85.

Application forms for overseas applicants are available from the Secretary, African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE.

(74135)

## University of Malawi APPOINTMENT VICE-CHANCELLOR

The Vice-Chancellor is the principal academic and administrative officer of the University. He/she will have overall responsibility for the University's academic and administrative affairs. The successful candidate will have a minimum of 10 years' experience in a senior position in a university or other institution of higher learning. He/she will be expected to participate in an active research programme, to supervise postgraduate research and to undertake a limited amount of undergraduate teaching and demonstrating.

Application forms for overseas applicants are available from the Secretary, African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE.

The policy of the University is not to discriminate on grounds of sex, race, colour or national origin.

(71027)

DEPARTMENT OF GERMANIC LANGUAGES, University of Toronto, Canada M5S 1A5. Invites enquiries regarding the appointment of a M.A. and a Ph.D. in Germanic Languages. (91854)

## Overseas continued

## Education Development Scheme

A number of Study Awards are to be offered by the Overseas Development Administration to enable candidates to enhance their qualifications by study or research and to widen their expertise to fit them for further employment within the Aid Programme or within related activities.

Applicants should be British Citizens below the age of 48 with a minimum of 8 years overseas experience in an aspect of education and should hold a degree and a professional teaching qualification. In certain circumstances these conditions may be waived for applicants who have been serving under the British Volunteer Programme, provided they have at least 2 years teaching experience in a developing country and hold the minimum academic and professional qualifications.

Awards customarily range from single term short courses to academic year degree courses and cover fees and provide an allowance towards living costs, books and stationery. The amount is determined by the circumstances of the candidates.

Closing date for applications is 1 March 1986.

For further details and application form, please apply, quoting ref. AH268/85-THES, to: Overseas Development Administration, Room AH 338, Abercrombie House, Eaglesham Road, EAST KILBRIDE, Glasgow G76 8EA.

## OVERSEAS DEVELOPMENT Britain helping nations to help themselves

## Senior Lecturer in Agricultural Management MANAGAGA AGRICULTURAL MANAGEMENT CENTRE - SWAZILAND

Managaga Agricultural Management Centre, run by the Commonwealth Development Corporation, is an international training institution serving the needs of agricultural managers from Third World countries. It offers post-experience management training in courses ranging from four to ten weeks duration for up to 35 managers.

The Centre has a vacancy for a Senior Lecturer with a relevant degree and postgraduate qualification who has experience of large scale agriculture and management training. In addition to responsibilities for training estate managers, the person appointed should preferably be prepared to make a contribution in the areas of organisational behaviour and/or personnel management.

Excellent terms and conditions will be offered for a fixed term contract with an attractive negotiable salary. Other benefits include: annual leave, good housing, education allowances, free medical assistance and terminal gratuity.

The position is open to men and women and preference will be given to candidates from Africa.

Applicants should send detailed CV to Mrs. V. Nicholas, Senior Personnel Executive, Commonwealth Development Corporation, 55 Hill Street, London W1A 0AP, from whom further details can be obtained.



## Commonwealth Development Corporation

## SCHOOL OF MUSIC

The University of the Witwatersrand, Johannesburg invites applications from persons for the post of Associate Professor/Senior Lecturer with special qualifications, interests and experience in one or more of the appropriate areas such as: theory (composition techniques and materials); musicology (history, bibliography and research); practical (instrumental performance skill, general musicianship, orchestral/conducting). Submit applications by 30 January 1986. For detailed information contact Mr. G. Henning, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE.

The policy of the University is not to discriminate on grounds of sex, race, colour or national origin.



UNIVERSITY OF THE WITWATERSRAND

## RMIT AUSTRALIA HEAD INFORMATION TECHNOLOGY DIVISION

RMIT is establishing an Information Technology Division to provide a structural focus which will enable the social, engineering, scientific, applications and policy dimensions of this field to be co-ordinated and integrated effectively.

In association with its member departments and affiliates, the Division will develop policy and establish and co-ordinate teaching activities in the area of Information Technology. It will have substantial involvement in applied research programmes and consultancies on all aspects of Information Technology. The initial members forming the Division are the

Department of Communication and Electronic Engineering  
Department of Computing  
Department of Information Services  
Information Systems Group (Faculty of Business)  
School of Electronic Technology  
School of Applied Electronics and Telecommunications.

The Institute is seeking to appoint a person as Head who will provide vital and effective leadership (both academic and administrative). The successful appointee will have a strong academic background with a record of achievement and research appropriate to information technology, experience in group leadership and project management and able to develop programmes which excel in both teaching and research.

Further information may be obtained from the Associate Director, Dr David Bealman, on (013) 660 2002. Applications close: February 28, 1986.

Salary: A\$53,130 p.a.

A Position Description should be obtained from Personnel Services by phoning (013) 660 2337 or telex AA36406 quoting Reference 191/01A. Written applications to Senior Appointments Officer: ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY LIMITED GPO Box 2476V, Melbourne, Victoria 3001, AUSTRALIA.

(71024)

## ASIAN INSTITUTE OF TECHNOLOGY BANGKOK, THAILAND

## BURSAR

Applications are invited for the position of the Senior Finance and Administrative officer of the Institute. The position is expected to become vacant in August 1986.

The Institute is a post-graduate regional institution with about 600 students drawn from Asia, and with faculty and staff from many countries. The Institute was established in 1959 and is financially supported by more than 50 governments, international organizations and businesses.

The appointee will be responsible to the president, mainly for the business and financial management of the Institute. Appointees should be university graduates with appropriate professional accounting qualifications and experience.

The appointment will be on a three-year contract basis and is renewable. The salary, conditions and remunerations will be based on the qualifications of the candidate selected. Further particulars are available.

Applications (two copies) should include full personal particulars, details of qualifications and experience, the names and addresses of three referees and a recent photograph forwarded to the academic secretary, AIT, PO Box 2754, Bangkok 10501, Thailand.

(71044)

## University of Utrecht, The Netherlands Faculty of Arts, department of English Language and Literature Full professor of American Literature in its social and cultural context

vac. nr.: 160.216

Candidates, holders of a Ph.D. degree, should have considerable experience in university teaching, research and administration. They must be prepared to acquire, within two years, a command of written and spoken Dutch that will enable them to function adequately in the Dutch university system. Applications, including a curriculum vitae and a list of publications, should be sent within four weeks from the publication of this advertisement, to the Dean of the Faculty of Arts, Kromme Nieuwe Gracht 46, 3512 HJ Utrecht, The Netherlands.

Salary scale: Dfl. 6,854,- Dfl. 9,485,- (before tax).

Further information may be obtained from Prof. Dr. A. Verhoeff, Instituut voor Engelse Taal- en Letterkunde, Oudenoord 6, 3513 ER Utrecht, tel. (0) 30-334114.

Equal opportunity in employment irrespective of sex is University policy.

(74140)

## UNIVERSITY OF CAPE TOWN Senior Lecturer in Chemical Engineering

Applications are invited for the above post, vacant from 1 July 1986. Salary range R26 403-R32 763 per annum, with an annual bonus and attractive staff benefits.

Applicants should submit a full curriculum vitae and the names and addresses of three referees, not later than 14 February 1986, to the Registrar (Attention: Appointments Office), University of Cape Town, Rondebosch, 7700, Republic of South Africa, quoting ref. 84 clearly on envelope and letter. Further information may be obtained from the Registrar or the Secretary, SA Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE.

The University's policy is not to discriminate on the grounds of sex, race or religion. Further information on the implementation of this policy is obtainable on request.

BWR4 0771

## Courses continued

## Brunel THE UNIVERSITY OF WEST LONDON DEPARTMENT OF GOVERNMENT MA IN PUBLIC AND SOCIAL ADMINISTRATION

The Department of Government offers places for a MASTER'S COURSE IN PUBLIC AND SOCIAL ADMINISTRATION.

The course provides an introduction to methods of research and theory in the field of public and social administration with the opportunity to study their application within a specialist option chosen from Community and Race Relations, Education, Health, History of Social Policy, Housing, Personal Social Services, Social Security and the Voluntary Sector. The application of methods and theory is also advanced through a dissertation relevant to the specialist option or to the student's own interests.

The course is offered full time for one year or part time over two years four months involving attendance of one day a week. It has E.C.R.C. Quota Status and the Personal Social Services and Social Security options carry COETSW post-qualifying status and student grants.

Applications from SAM, Department of Government, Brunel University, Uxbridge, Middlesex, UB8 3PH, enclosing a 9" x 8" s.a.o. as soon as possible.

(74116)

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(74140)

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